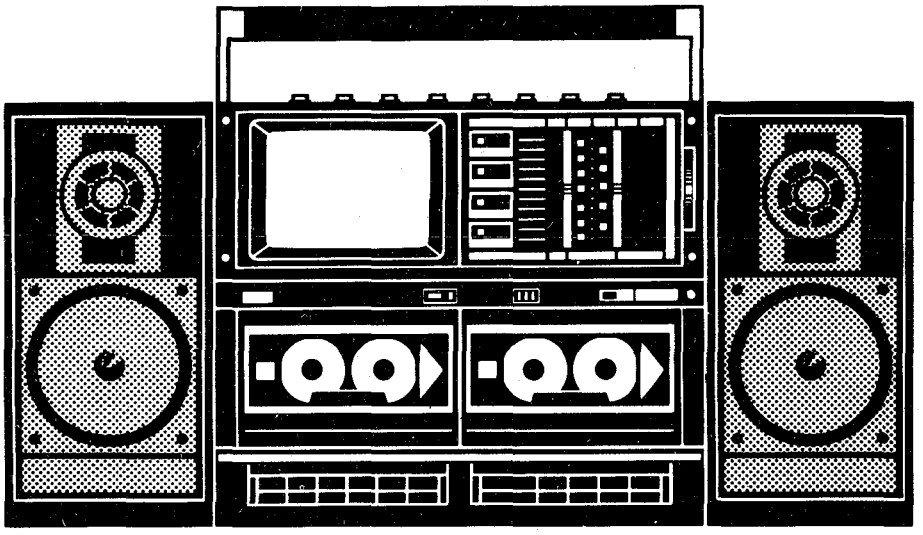
AR37

MODEL: RTC-8310

PORTABLE 4.5″ TELEVISION
WITH TWIN CASSETTE, MW/LW/FM
STEREO RADIO AND
GRAPHIC EQUALIZER

TENSAI
INTERNATIONAL



Service Manual

SPECIFICATIONS

TV SECTION

C.R.T.	4.5" B/W, 90°
Channel	VHF (L) : 2-4 ch
	VHF (H) : 5-12 ch
	UHF : 21-69 ch
IF Frequency	
Video	38.9 MHz
Sound	33.4 MHz
Sensitivity	VHF: 15dB
	UHF: 20dB
High Voltage	7.2Kv MAX
Matching Unit	75 ohm
(Connectied by External Terminal)	

FM SECTION

Frequency Range	87.5-108 MHz
30dB S/N Sensitivity	22dB
Image Rejection	30dB
S/N Ratio	62dB
Separation	24dB

LW SECTION

Frequency Range	145-315KHz
20dB S/N Sensitivity	62dB
Image Rejection	32dB
MAX Sensitivity	54dB

MW SECTION

Frequency Range	525-1605 KHz
20dB S/N Sensitivity	51dB
Image Rejection	42dB
S/N Ratio	40dB

CASSETTE SECTION

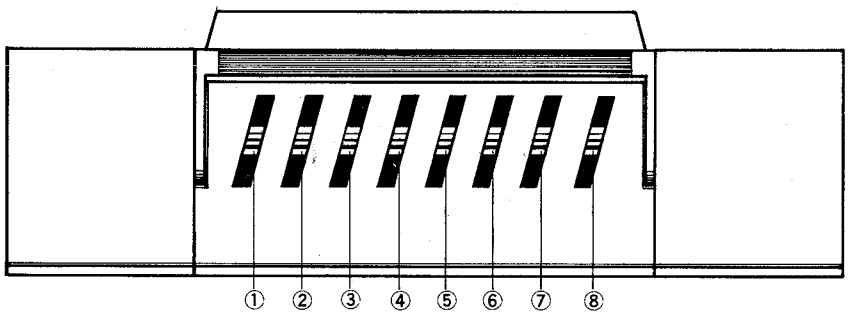
Tape Speed	4.75cm/sec.
Wow & Flutter	0.25%
S/N Ratio	42dB
CH. Separation	40dB
Rec. System	AC Bias
Erasing System	AC Erase
F.F/REW Time	110sec, (C-60)

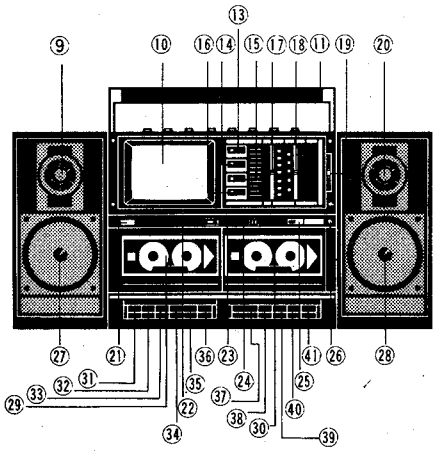
GENERAL

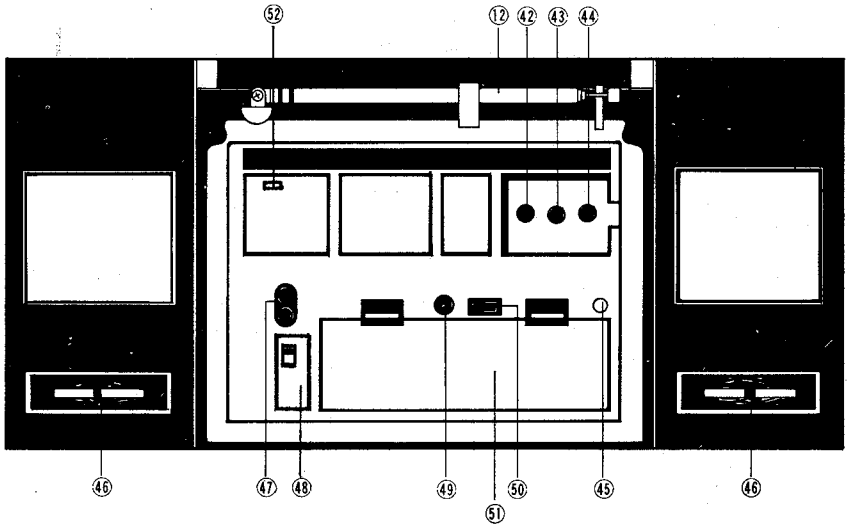
Power Source	
AC	220V 50Hz
DC	15V (UM-1, "D" Size x 10)
MAX. Output Power	1.5W x 2
Speaker	3", 16ohm Dynamic
	ϕ20, Dia Piezo Tweeter
Dimension	524(W)x248(H)x160(D)mm
Weight	5.3Kg

* Specifications subject to change without notice for improvement.

CONTROL LOCATION



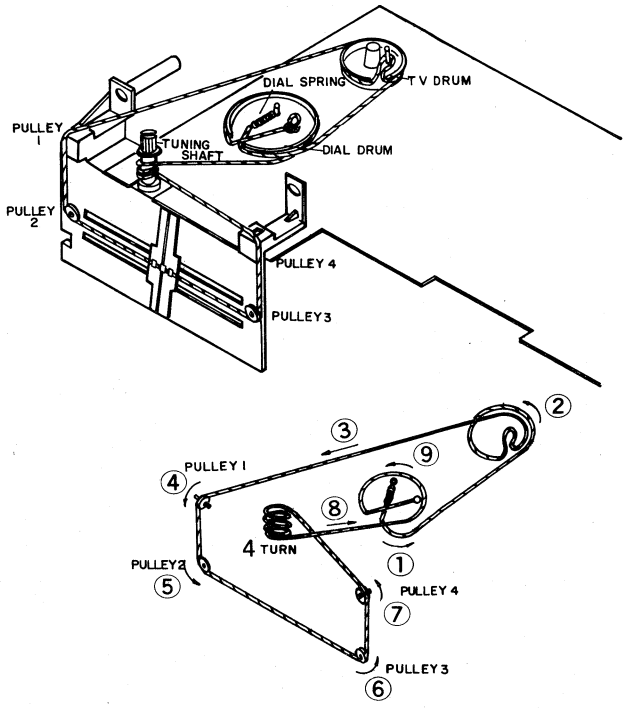




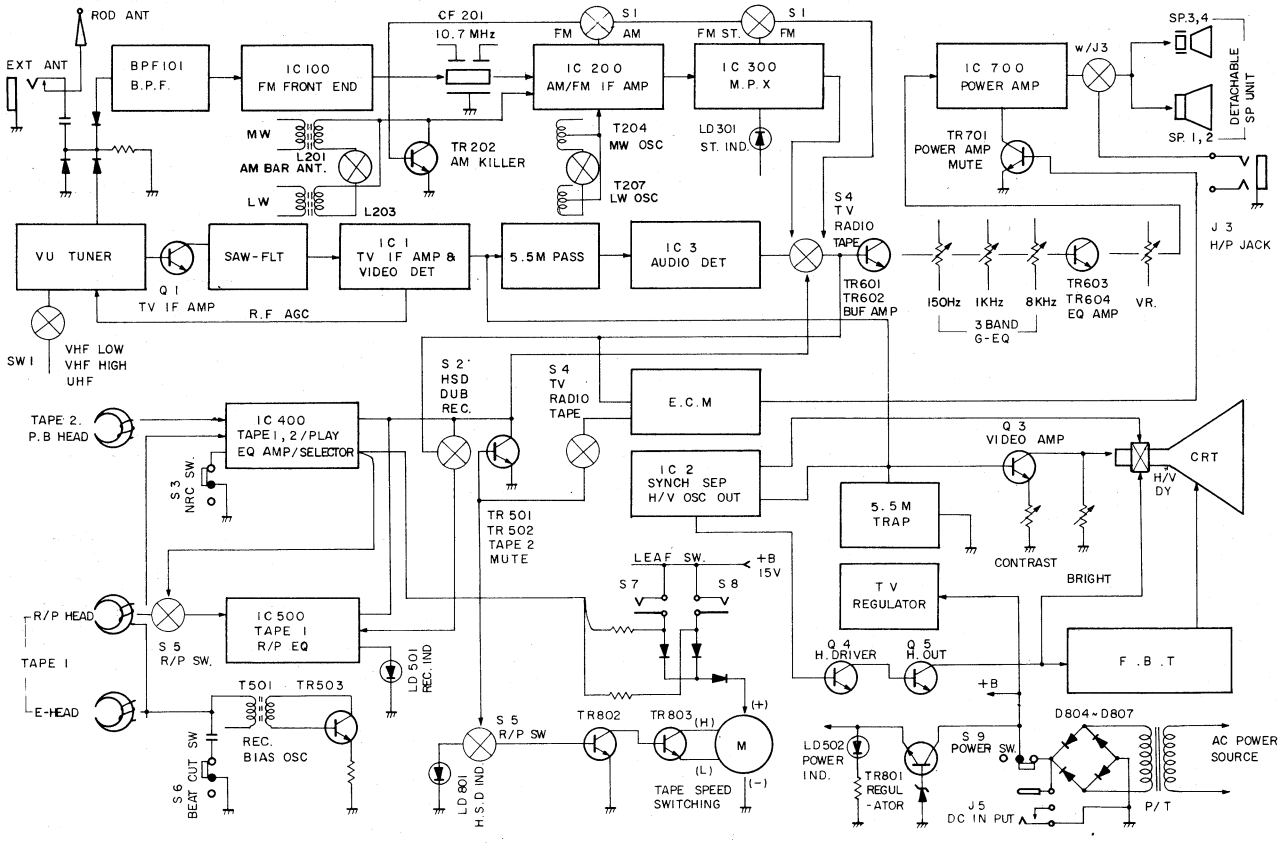
1. Function Selector Switch Tape/Radio/TV
2. Band Selector Switch AM/FM/FM Stereo
3. TV Band Selector Switch VHF-L/VHF-H/UHF
4. Graphic Equalizer 150Hz
5. Graphic Equalizer 1KHz
6. Graphic Equalizer 8KHz
7. Volume Control
8. Balance Control
9. Tweeter Speaker
10. C.R.T
11. Handle
12. Rod Ant.
13. Power Indicator
14. FM Stereo Indicator
15. Recording Indicator
16. Hi-Dubbing Indicator
17. TV Dial Pointer
18. Radio Dial Pointer
19. Tuning Knob
20. Tweeter Speaker
21. Power Switch
22. Condenser Mic
23. Tape Counter
24. Tape Noise Reduction Switch
25. Recording Selector Switch
26. Headphone Jack
27. Left Speaker
28. Right Speaker
29. "Tape A" Cassette Door
30. "Tape B" Cassette Door
31. "Tape A" Recording Button
32. "Tape A" Play Button
33. "Tape A" Rewind Button
34. "Tape A" Fast Forward Button
35. "Tape A" Stop/Eject Button
36. "Tape A" Pause Button
37. "Tape B" Play Button
38. "Tape B" Rewind Button
39. "Tape B" Fast Forward Button
40. "Tape B" Stop/Eject Button
41. "Tape B" Pause Button
42. V-Hold
43. Contrast
44. Brt.
45. Ext. Ant. Jack
46. Speaker Cord
47. Speaker Jack L.R
48. Beat Cut Switch
49. Ext. DC12-15V Jack
50. AC Socket
51. Battery Cover
52. AM Band Selector (MW/LW)

DIAL CORD STRINGING

1. Dial String Length 1100mm.
2. Arrows 1-9 show the Correct order and Direction to run Dial String.



BLOCK DIAGRAM



AUDIO SECTION VOLTAGE CHART

1. TRANSISTOR

PIN NO. / TR NO.	E	C	B
TR202	0.00	0.01	0.63
TR501,502	0.00	0.00	0.63
TR503	0.33	5.82	1.08
TR601,602	3.18	6.09	3.76
TR603,604	0.37	3.47	0.99
TR701	0.00	0.02	0.68
TR801	8.34	17.07	8.89
TR802	0.00	0.00	0.67
TR803	7.82	12.36	0.00

2. IC

NO SIGNAL

PIN NO. / IC NO.		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
IC100	(FM)	0.81	1.55	4.42	1.51	GND	4.44	3.68	4.39	4.45									
IC200	(FM)	0.01	0.01	2.37	2.37	0.85	0.85	NC	GND	1.47	4.59	4.59	1.43	1.43	1.43	1.43	4.59		
	(AM)	1.53	1.53	2.33	2.33	0.95	0.97	NC	GND	1.40	6.53	6.53	1.43	1.43	1.43	1.43	6.53		
IC300	(FM)	6.26	2.33	1.62	1.88	1.83	6.66	GND	0.37	2.50	1.41	1.41	0.07	1.43	1.43	1.41	0.07		
	(AM)	6.30	2.33	1.62	1.88	1.83	6.68	GND	0.37	3.29	1.41	1.41	0.07	1.43	1.43	1.41	0.06		
IC400	(PLAY)	0.00	0.00	0.00	0.00	0.61	0.61	0.73	GND	0.73	7.16	0.69	7.51	5.57	5.55	0.00	0.00	4.12	0.00
IC500	(REC)	1.78	0.00	1.78	GND	0.11	7.00	1.78	0.10	1.78									
IC700		0.57	0.00	17.24	GND	0.01	0.57	8.69	GND	17.24	8.79								

TV SECTION VOLTAGE CHARTS

1. IC

PIN NO. / IC NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
IC1	7.6	0	2.6	2.17	5.40	2.1	9.58	4.75	4.77	4.8	4.8	6.26	0	7.6		
IC2	4.65	6.44	3.43	10.5	1.34	1.88	10.1	4.88	0.47	6.85	0.7	3.51	3.44	2.33	4.22	1.08
IC3	9.75	4.65	2.15	2.96	4.17	6.55	0	3.28	6.55	2.35	6.55	3.70	3.65	3.64		

2. TUNER

PIN NO.	1	2	3	4	5	6	7	8	9	10	REMARK
VHF. LOW	0	1.77	0.11	X	30.2	0	0	8.7	8.7	0	PIN 4 is Change Voltage by Position of VR the Tuning Volume
VHF. HIGH	0	1.77	0.10	X	0	0	0	8.4	8.40	0	
UHF	0	1.65	8.43	X	0	7.25	7.25	0.1	8.42	0	

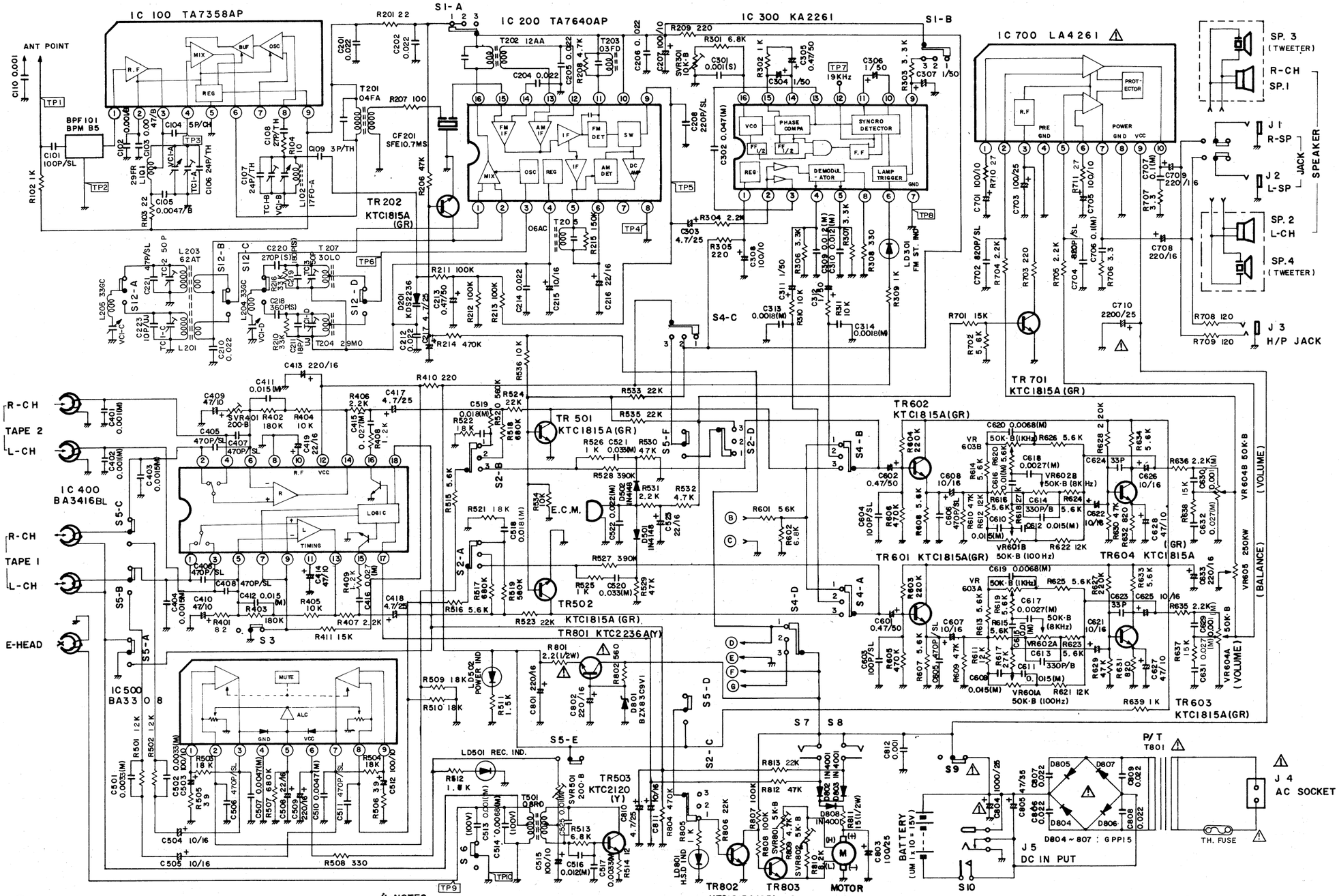
3. TRANSISTOR

PIN NO. / TR. NO.	E	C	B
Q1	1.77	8.7	2.53
Q2	30.6	41.6	31.2
Q3	3.5	35.4	3.76
Q4	0	2.91	0.31
Q5	10.21	0	0
Q6	15	10.5	14.4
Q7	3.79	14.32	4.4

4. CRT SOCKET

PIN NO.	1	2	3	4	5	6	7
VOLTAGE	0.43	16.17	5.81	0	0.43	234	75V

SCHEMATIC DIAGRAM (AUDIO)



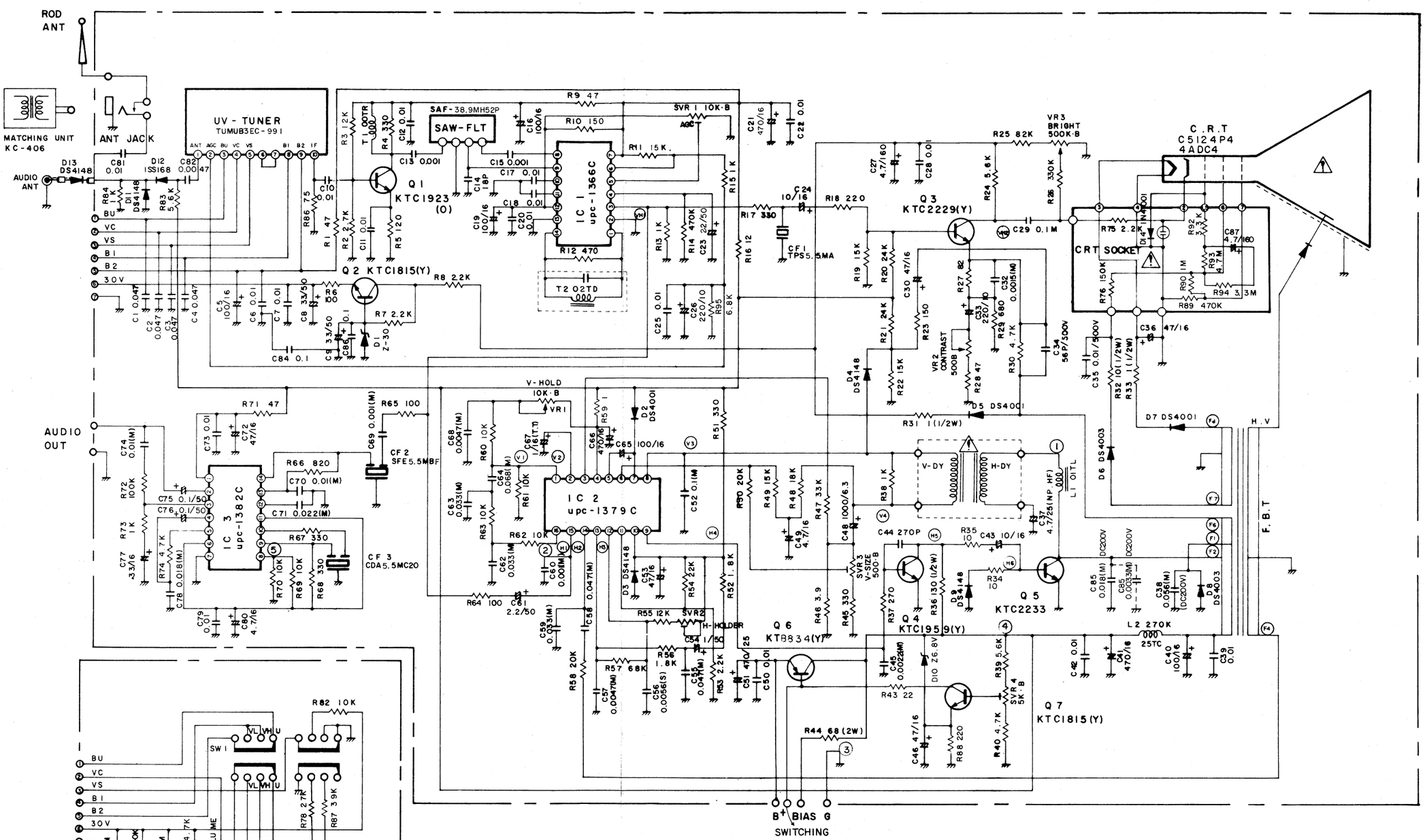
● SWITCHES

S 1 - A-C : RADIO BAND. (FM ST / FM/AM)
S 2 - A-D : REC. MODE. (HSD / DUB./REC.)
S 3 : NOISE REDUCTION.
S 4 - A-D : FUNCTION SW. (TV/RADIO/TAPE)
S 12 - A D : AM BAND. (LW / MW)
S 5 - A-F : R/P (PLAY/REC.)
S 6 : BEAT CUT (1 / 2)
S 7, S 8 : LEAF SW.
S 9 : POWER SW.
S 10 : AC SOCKET SW.

※ NOTES

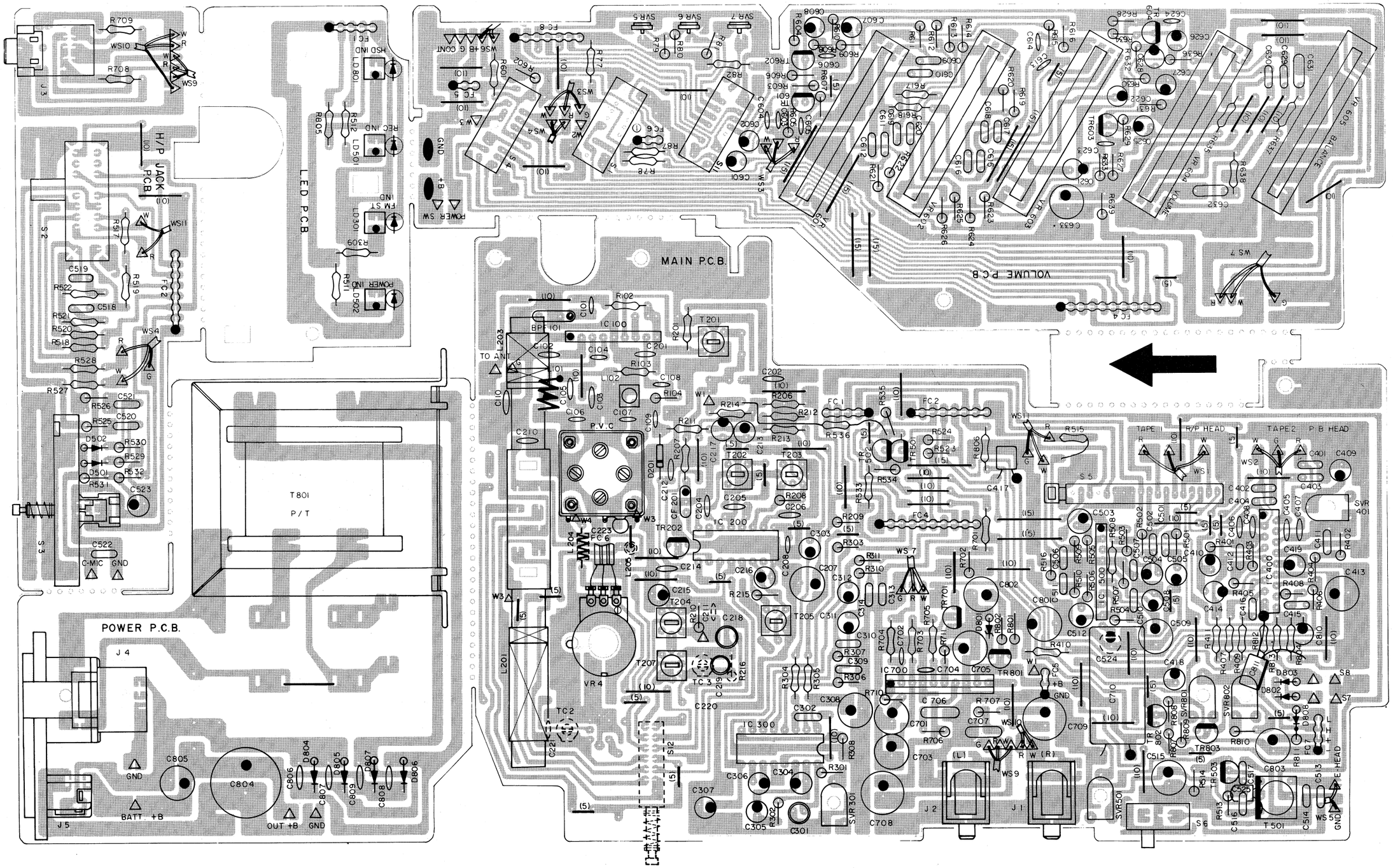
1. RESISTANCE VALUES ARE INDICATED IN OHM 1/8W UNLESS OTHERWISE SPECIFIED. (K = 10^3, M = 10^6)
2. CAPACITANCE VALUES ARE SHOWN IN uF, DC 50(V) UNLESS NOTED. (u = 10^{-6}, P = 10^{-12}, -(M) = MYLAR, -(S) = STYROL, (X) = SEMICONDUCTIVE)
3. ELECTROLYTIC CAPACITORS ARE INDICATES AS FOLLOWS: CAPACITANCE (uF) / WORKING VOLTAGE(V)
4. THIS SCHEMATIC DIAGRAM'S COMPONENT VALUES ARE SUBJECT TO CHANGE WITHOUT NOTICE FOR IMPROVEMENT.

SCHEMATIC DIAGRAM (TV)

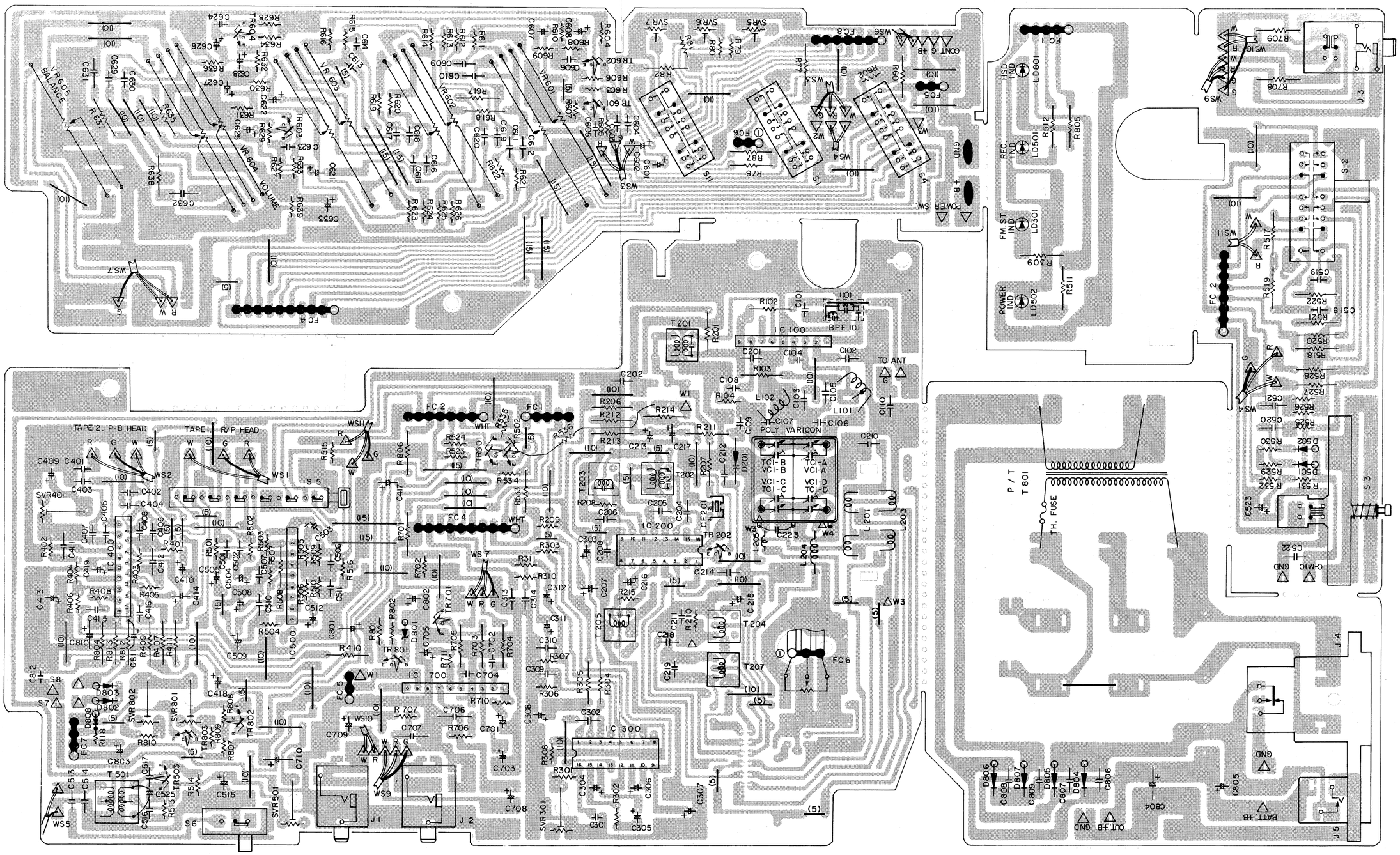


VH1	VH2	V1	V2	V3	V4	H1	H2	H3	H4	H5	H6	F1	F2	F4	F6	F7	F8
1.5V P.P	40V P.P	2.2V P.P	1.8V P.P	23V P.P	3.2V P.P	1.2V P.P	1.1V P.P	2.2V P.P	1V P.P	3.3V P.P	5.6V P.P	96V P.P	92V P.P	118V P.P	55V P.P	400V P.P	11V P.P

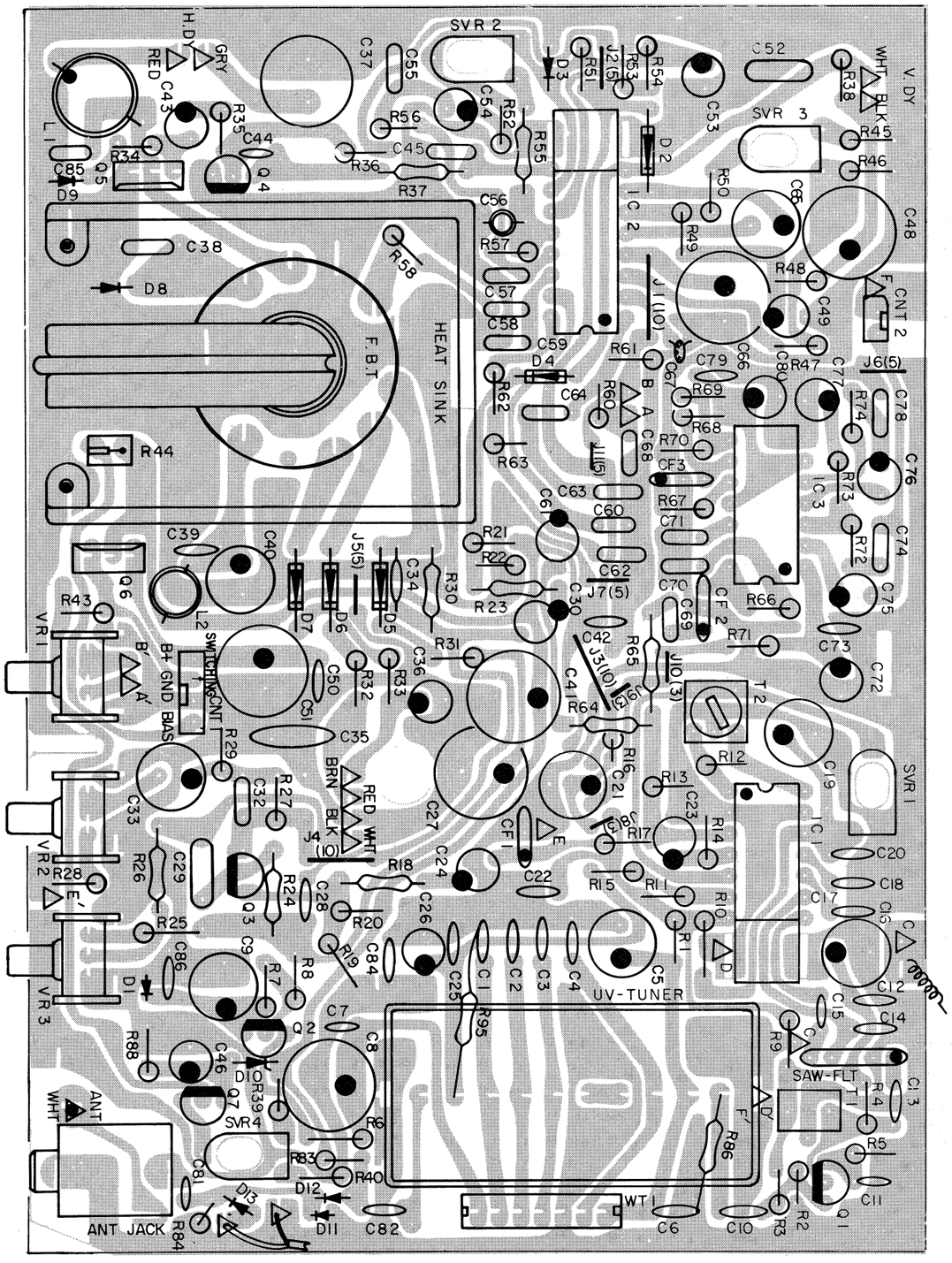
P. C. BOARD TOP VIEW (AUDIO)



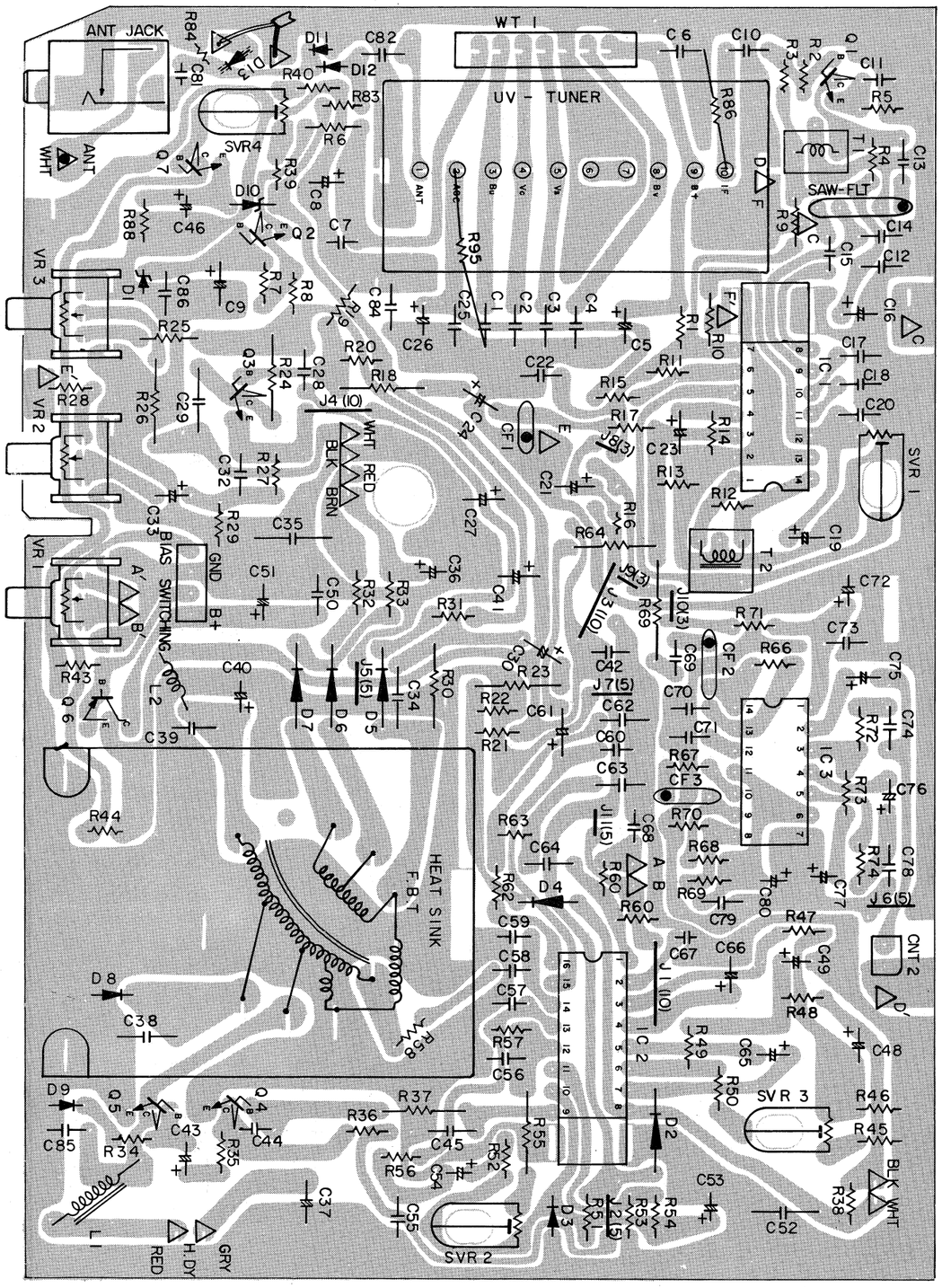
P. C. BOARD BOTTOM VIEW(AUDIO)



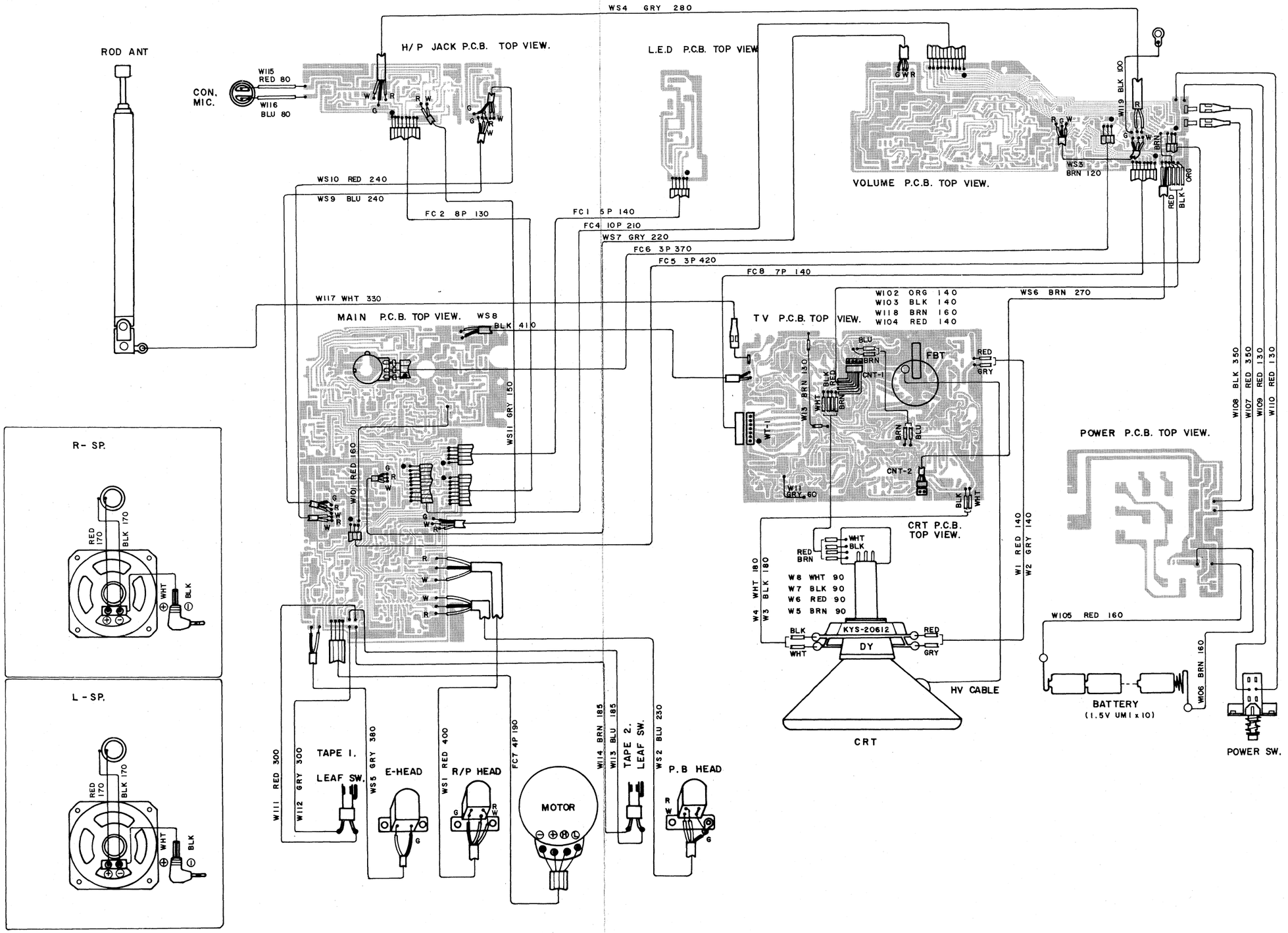
TV P. C. BOARD TOP VIEW



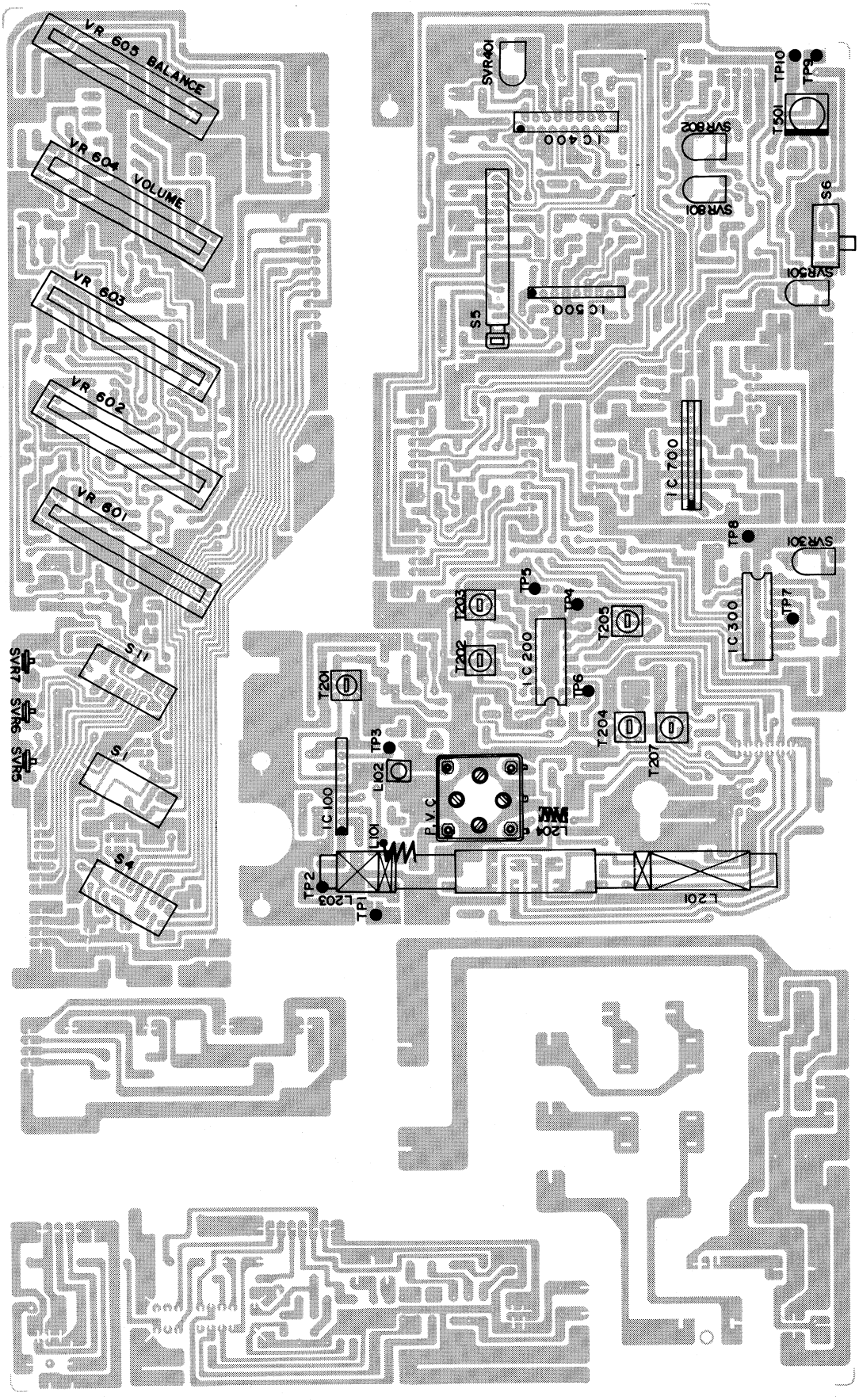
TV P. C. BOARD BOTTOM VIEW



WIRING DIAGRAM



ADJUSTMENT POINTS



TUNER ADJUSTMENTS

MW ALIGNMENT

Step	Alignment	Connection	Frequency of signal Generator	Tuning Dial setting	Adjustment	Remarks
1	IF Calibration	Fig.–3	455KHz	Low End	T202	Maximum output
2	Tuning Range Calibration	Fig.–5	515KHz	Low End	AM OSC,T204	Maximum output
3			1650KHz	High End	TC1-D	
4	Adjustment of Tracking	Fig.–5	600KHz	600KHz	Bar Ant. L201	Maximum Output
5			1400KHz	1400KHz	TC1-C	
6		Repeat the above adjustment				

LW ALIGNMENT

Step	Alignment	Connection	Frequency of signal Generator	Tuning Dial setting	Adjustment	Remarks
1	IF Calibration	Fig.–3	455KHz	Low End	T202	Maximum output
2	Tuning Range Calibration	Fig.–5	145KHz	Low End	LW OSC,T207	Maximum output
3			315KHz	High End	TC3	
4	Adjustment of Tracking	Fig.–5	180KHz	180KHz	Bar Ant. L203	Maximum Output
5			280KHz	280KHz	TC2	
6		Repeat the above adjustments.				

FM ALIGNMENT

Step	Alignment	Connection	Frequency of signal Generator	Tuning Dial setting	Adjustment	Remarks
1	IF Calibration	Fig.–4	10.7 MHz	Low End	T201, 205	Max gain and Symmetrical "S" Curve
2	Tuning Range Calibration	Fig.–6	87.37MHz	Low End	L102	Maximum output
3			108.25MHz	High End	TC1-B	
4	Adjustment of Tracking	Fig.–6	90 MHz	90 MHz	L101	Maximum Output
5			106 MHz	106 MHz	TC1-A	
6		Repeat the above adjustment				

FM STEREO ADJUSTMENT

1) Connect a frequency counter to test points (TP 8) on the Main P.C. Board.
2) Set positions:
   Function Switch: Radio position. Band Switch: FM position.
   Mode Switch: STEREO position.
3) Adjust Potentiometer (SVR301) on the Main PCB for a frequency counter reading of 19 KHz.

REMARKS:

1) When aligning FM IF, the symmetrical curve may not be obtained by setting the marker of the Sweep Generator (10.7 MHz). This is due to the ceramic filter used in the unit. Regardless of the marker, align the curve as symmetrically as possible with peak output.
2) When aligning the Tuning Range and adjusting the Tracking, proceed with alignment in a sequence of FM → MW/LW.
3) Use a screwdriver with a plastic grip for all alignments.

EQUIPMENT CONNECTION

Fig. 3
MW/LW IF

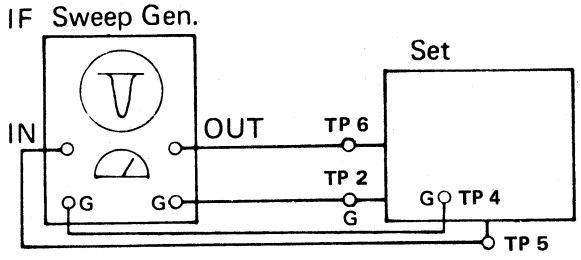


Fig. 4
FM IF

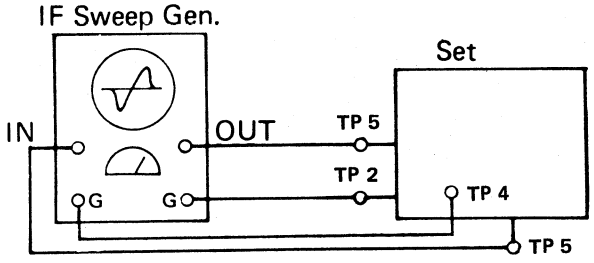


Fig. 5
MW or LW BAND TRACKING

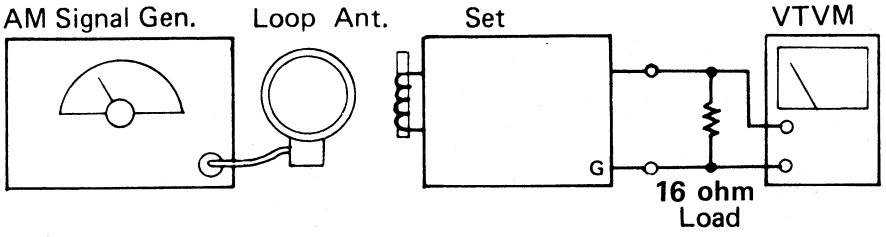
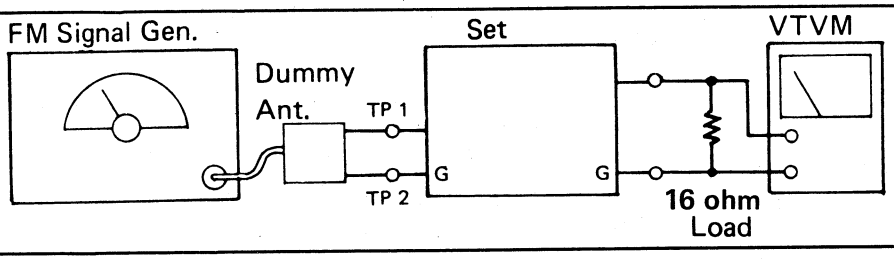


Fig. 6
FM BAND TRACKING



TAPE SPEED ADJUSTMENT

*** TAPE DECK 1**

1. Connect a frequency counter to the Headphone Jack in parallel with a 16 ohm non-reactive dummy load.
2. Adjust control on the Motor to display 3020 Hz (2940-3090Hz) on the counter while playing back an MTT-111 test tape (3000 Hz).

*** TAPE DECK 2**

1. Same as above procedure.

CHANNEL BALANCE ADJUSTMENT

*** TAPE DECK 1, 2**

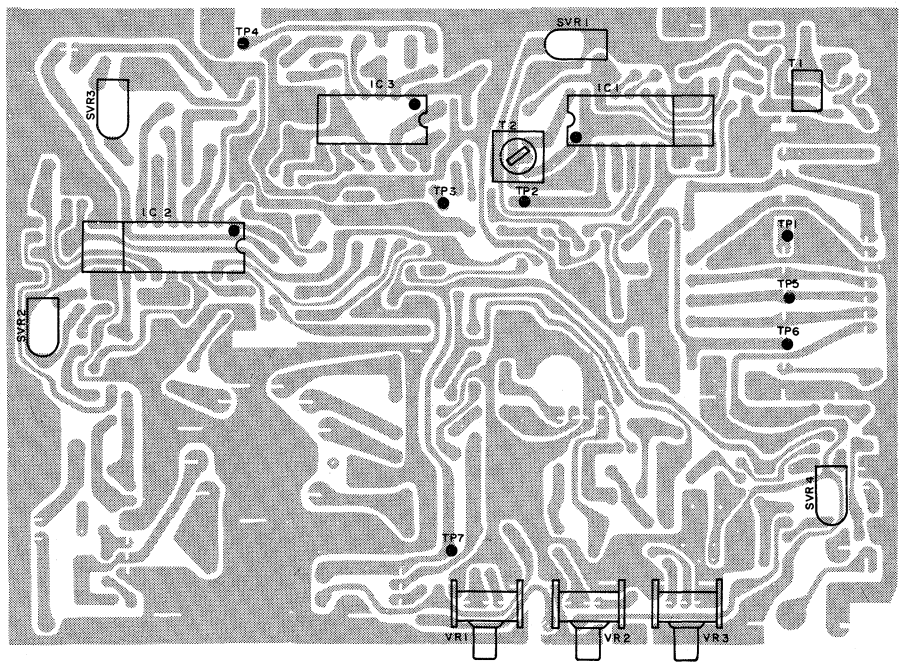
1. Connect a VTVM and a Oscilloscope to the Headphone Jack. The Dummy load should be 16 ohm.
2. Set the function switch to TAPE Position.
3. Insert a 1kHz Test Tape (MTT-118) into the TAPE DECK 1,2. Playback a test tape and adjust a potentiometer (SVR 401) on the main P.C. Board until both channels at the same level.

HIGH SPEED ADJUSTMENT

* At same above condition of Tape speed Adjustment.

1. Adjust potentiometer SVR 802 becomes 6 kHz.
2. Adjust potentiometer SVR 801 becomes 3 kHz to Frequency counter.

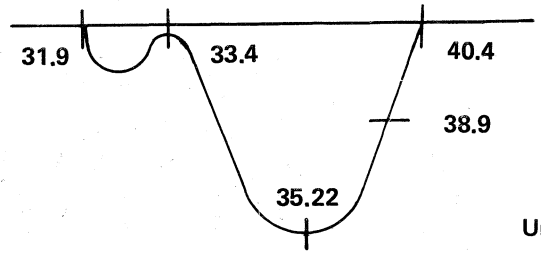
ADJUSTMENT POINTS



TV ADJUSTMENT

1) PIF CURVE ADJUSTMENT

* Frequency : 31.9MHz, 33.4MHz, 35.22MHz, 38.9MHz, 40.4MHz
* Method of Measurement and Curve.



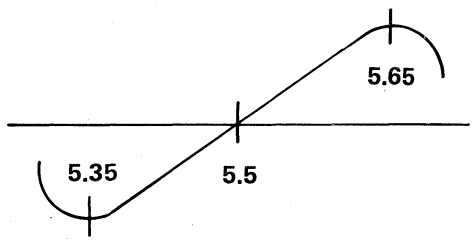
Unit : MHz

As above PIF Curve

1) Adjustment Semi VR (VR1) for RF AGC Maximum.
2) Adjustment DET Coil (T2) becomes PIF Curve.

2) SIF CURVE ADJUSTMENT

* Frequency setting : 5.35MHz, 5.5MHz, 5.65MHz.



Unit : MHz

As above SIF Curve

1) Connect a sweemar scope to (TP 3) and (TP 4).
2) Display "S" type Curve to sweemar scope.

3) PICTURE CENTER ADJUSTMENT

* Method of Measurement

1) Becomes Minimum Vertical size by adjust SVR 3.
2) Adjustment center magnet of D.Y.

4) COVER RANGE OF TUNING VOLTAGE

At UHF Band : Adjustment SVR7 becomes low voltage 0.5V and high voltage 27.9V.
At VHF (L) Band : Adjustment SVR5 becomes low voltage 1V and high voltage 23.7V.
At VHF (H) Band : Adjustment SVR6 becomes low voltage 3V and high voltage 24.7V.

Same as above procedure

1) When low voltage, becomes minimum position by adjustment tuning VR (VR4).
2) When high voltage, adjustment tuning VR (VR 4) becomes maximum position.
3) Repeat the above adjustment.

5) V-HOLD AND H-HOLD ADJUSTMENT

Methods of Measurement

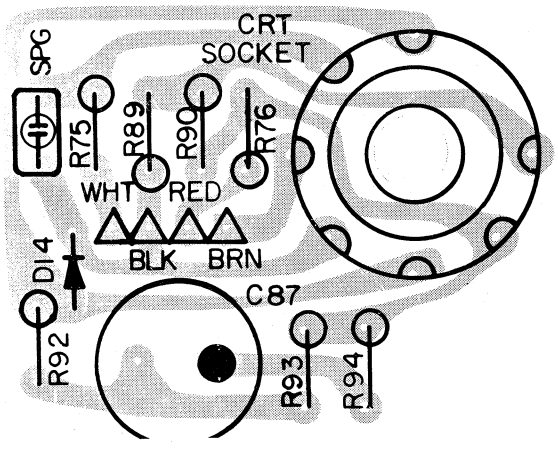
1) 4 CH setting to test pattern signal.
2) Adjust VR1 becomes input to vertical Synchronization signal.
3) Adjustment SVR 2 becomes input to horizontal synchronization signal.

6) RF AGC ADJUSTMENT

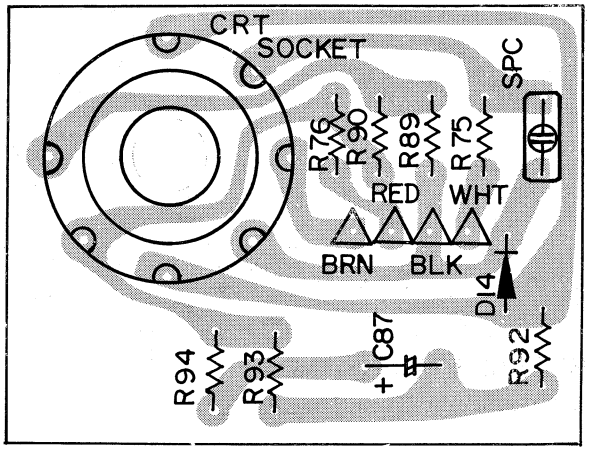
Connect DC voltmeter to AGC terminal of tuner and adjustment SVR 1 becomes 2.7V.

CRT SOCKET PCB

TOP VIEW



BOTTOM VIEW



ELECTRICAL PARTS LIST

(AUDIO)

SYMBOL NO.	PART NO.	DESCRIPTION	Q'TY
IC100		TA7358AP FM F/E IC	1
IC200		KIA7640AP AM/FM IF IC	1
IC300		KA2261 MPX IC	1
IC400		BA3416BL PLAY EQ IC	1
IC500		BA3308 REC IC	1
IC700		LA4261 POWER IC	1
TR202,501, 502,802,803, 601,602,603, 604,701		KTC1815A(GR) TRANSISTOR	10
TR503		KTC2120(Y) TRANSISTOR	1
TR801		KTC2236A(Y) TRANSISTOR	1
D201		KDS2236 VARICAP DIODE	1
D501,502		1N4148 SWITCHING DIODE	2
D801		BZX83-C9V1 ZENER DIODE	1
D802,803, 808		1N4001 RECTIFIER DIODE	3
D804,805, 806,807		GPP-15B RECTIFIER DIODE	4
LD301		SLB-55MG5 LED DIODE	1
LD501,502		SLB-55VR5 LED DIODE	2
LD801		SLB-55YY5 LED DIODE	1
BPF101		BPMB5 BAND PASS FILTER	1
CF201		SFE10.7MS2 FM IF FILTER	1
T201		04FA FM 1st IFT	1
T202		12AA AM 1st IFT	1
T203		03FD FM DET IFT	1
T205		06AC AM DET IFT	1
T204		29MO MW OSC COIL	1
T207		30LO LW OSC COIL	1
L101		29FR FM RF COIL	1
L102		17FO-A FM OSC COIL	1
L201,203		62AT MW/LW BAR ANT.	1
L204,205		PEAKING COIL	2
T501		08RO BIAS OSC COIL	1
T801		57-37P-VF POWER TRANSFORMER	1
DECK		TN-21SW-501 DECK MECHANISM	1
VR601,602, 603		S3028KC-50KBx2 VARIABLE RESISTOR	3
VR604		S3028HC-50KBx2 VARIABLE RESISTOR	1
VR605		S3018KC-250KW VARIABLE RESISTOR	1
SVR301		RVM083H-1 10KB SEMIFIXED RESISTOR	1
SVR401,501		RVM083H-1 200B SEMIFIXED RESISTOR	2
SVR801,802		RVM083H-1 5KB SEMIFIXED RESISTOR	2
S1,4		00430014BC FUNCTION, RATIO BAND SWITCH	2
S2		00430185 HSD./DUBBING/ REC. SWITCH	1
S3		TR2321279 N.R.C SWITCH	1
S5		00620434N REC. SWITCH	1
S6		00120050 BEAT CUT SWITCH	1
S9		SDW-1P POWER SWITCH	1
S12		R2320549-Q MW/LW BAND SELECTOR SWITCH	1
J1,2		HSJ0707-01-020 SPEAKER JACK	2
J3		HSJ0924-01-140 HEADPHONE JACK	1
J4		HSC1462-01-010 AC IN LET JACK	1
SP1,2		CS9T2948B SPEAKER	2
SP3,4		WSS-20-15 PIEZO TWEETER SPEAKER	2
ROD ANT.		5B180B ROD ANT.	1
VC1-4		PVC-22KT-LD1 POLY VARICON	1
TC2,3		CV05A 500 TRIMMER CAPACITOR	2
CON. MIC		JS-80C CONDENSER MIC	1
C211		18PF 50V, CERAMIC CAPACITOR	1
C104		5PF 50V, CERAMIC CAPACITOR	1
C109		3PF 50V, CERAMIC CAPACITOR	1

SYMBOL NO.	PART NO.	DESCRIPTION	Q'TY
C106,107		24PF 50V, CERAMIC CAPACITOR	2
C108		27PF 50V, CERAMIC CAPACITOR	1
C623,624		33PF 50V, CERAMIC CAPACITOR	2
C101,603, 604		100PF 50V, CERAMIC CAPACITOR	3
C208		220PF 50V, CERAMIC CAPACITOR	1
C613,614		330PF 50V, CERAMIC CAPACITOR	2
C405,406,407, 408,506,511, 606,605		470PF 50V, CERAMIC CAPACITOR	8
C702,704		820PF 50V, CERAMIC CAPACITOR	2
C102,110,812		0.01μF 50V, CERAMIC CAPACITOR	3
C103,105		0.047μF 50V, CERAMIC CAPACITOR	2
C201,202,204, 205,206,210, 212,214,806, 807,808,809		0.022μF 50V, CERAMIC CAPACITOR	12
C223		10PF 50V, CERAMIC CAPACITOR	1
C221		47PF 50V, CERAMIC CAPACITOR	1
C401,402, 629,630		0.001μF 50V, MYLAR CAPACITOR	4
C631,632, 415,416		0.027μF 50V, MYLAR CAPACITOR	4
C617,618		0.0027μF 50V, MYLAR CAPACITOR	2
C507,510		0.0047μF 50V, MYLAR CAPACITOR	2
C619,620		0.0068μF 50V, MYLAR CAPACITOR	2
C514		0.0068μF 100V, MYLAR CAPACITOR	1
C525,615, 616		0.01μF 50V, MYLAR CAPACITOR	3
C516,309, 310		0.012μF 50V, MYLAR CAPACITOR	3
C411,412,609, 610,611,612		0.015μF 50V, MYLAR CAPACITOR	6
C522		0.022μF 50V, MYLAR CAPACITOR	1
C520,521		0.033μF 50V, MYLAR CAPACITOR	2
C706,707		0.1μF 50V, MYLAR CAPACITOR	2
C313,314		0.0018μF 50V, MYLAR CAPACITOR	2
C502		0.047μF 50V, MYLAR CAPACITOR	1
C513		0.001μF 100V, MYLAR CAPACITOR	1
C518,519		0.018μF 100V, MYLAR CAPACITOR	2
C517,501,502		0.033μF 50V, MYLAR CAPACITOR	3
C213,305, 601,602		0.47μF 50V, ELECTROLYTIC CAPACITOR	4
C304,306, 307,311,312		1μF 50V, ELECTROLYTIC CAPACITOR	5
C217,303, 417,418,810		4.7μF 25V, ELECTROLYTIC CAPACITOR	5
C215,504, 505,607,608, 621,622,625, 626,811		10μF 16V, ELECTROLYTIC CAPACITOR	10
C403,404		0.0015μF 50V, MYLAR CAPACITOR	2

SYMBOL NO.	PART NO.	DESCRIPTION	Q'TY
C216,419, 508,523		22μF 16V, ELECTROLYTIC CAPACITOR	4
C409,410, 414,627,628		47μF 10V, ELECTROLYTIC CAPACITOR	5
C805		47μF 35V, ELECTROLYTIC CAPACITOR	1
C207,308, 503,512,515, 701,705		100μF 10V, ELECTROLYTIC CAPACITOR	7
C703,803		100μF 25V, ELECTROLYTIC CAPACITOR	2
C413,509, 603,708,709 801,802		220μF 16V, ELECTROLYTIC CAPACITOR	7
C804		1000μF 25V, ELECTROLYTIC CAPACITOR	1
C701		2200μF 25V, ELECTROLYTIC CAPACITOR	1
C301		0.001μF 50V, SYTROL CAPACITOR	1
C218		360PF 50V, STYROL CAPACITOR	1
C220		270PF 50V, STYROL CAPACITOR	1
C219		180PF 50V, STYROL CAPACITOR	1
R706,707		3.3ohm CARBON FILM, 1/8W P.R	1
R104		10ohm CARBON FILM, 1/8W P.R	1
R514		12ohm CARBON FILM, 1/8W P.R	1
R505,506		39ohm CARBON FILM, 1/8W P.R	2
R209		220ohm CARBON FILM, 1/8W P.R	1
R308		330ohm CARBON FILM, 1/8W P.R	1
R802		560ohm CARBON FILM, 1/8W P.R	1
R631,632		820ohm CARBON FILM, 1/8W P.R	2
R302,525, 526,639		1Kohm CARBON FILM, 1/8W P.R	4
R406,531, 636		2.2Kohm CARBON FILM, 1/8W P.R	3
R303,306, 307		3.3Kohm CARBON FILM, 1/8W P.R	3
R401		82ohm CARBON FILM, 1/8W P.R	1
R532,208, 809		4.7Kohm CARBON FILM, 1/8W P.R	3
R607,608, 613,614,615, 616,619,620, 623,624,625, 626,633,634, 702,515,516		5.6Kohm CARBON FILM, 1/8W P.R	17
R301,513, 602		6.8Kohm CARBON FILM, 1/8W P.R	3
R810		8.2Kohm CARBON FILM, 1/8W P.R	1
R501,502,611, 612,621,622		12Kohm CARBON FILM, 1/8W	6
R509,510,503, 504		18Kohm CARBON FILM, 1/8W P.R	4
R523,524		22Kohm CARBON FILM, 1/8W P.R	2
R710,711		27ohm CARBON FILM, 1/8W P.R	2
R408		1.2Kohm CARBON FILM, 1/8W P.R	1
R529,530,609, 610,629,630		47Kohm CARBON FILM, 1/8W P.R	6
R807,808		100Kohm CARBON FILM, 1/8W P.R	2
R603,604, 627,628		220Kohm CARBON FILM, 1/8W P.R	4

SYMBOL NO.	PART NO.	DESCRIPTION	Q'TY
R605,606		470Kohm CARBON FILM, 1/8W P.R	2
R507		680Kohm CARBON FILM, 1/8W P.R	1
R404,406, 310,534		10Kohm CARBON FILM, 1/8W P.R	4
R535		22Kohm CARBON FILM, 1/8W P.R	1
R210,216		33Kohm CARBON FILM, 1/8W P.R	2
R215		150Kohm CARBON FILM, 1/8W P.R	1
R402,403		180Kohm CARBON FILM, 1/8W P.R	2
R801		2.2ohm FUSING, 1/2W P.R	1
R811		15ohm FUSING, 1/2W P.R	1
R103,201		22ohm CARBON FILM, 1/8W P.M	2
R207		100ohm CARBON FILM, 1/8W P.M	1
R708,709		120ohm CARBON FILM, 1/8W P.M	2
R305,410, 703		220ohm CARBON FILM, 1/8W P.M	3
R508		330ohm CARBON FILM, 1/8W P.M	1
R409,102, 309,805		1Kohm CARBON FILM, 1/8W P.M	4
R511,512		1.5Kohm CARBON FILM, 1/8W P.M	2
R304,407, 635,704,705		2.2Kohm CARBON FILM, 1/8W P.M	4
R409		1.2Kohm CARBON FILM, 1/8W P.M	1
R521,522		18Kohm CARBON FILM, 1/8W P.M	2
R411,637, 638,701		15Kohm CARBON FILM, 1/8W P.M	4
R533,806		22Kohm CARBON FILM, 1/8W P.M	2
R617,618		27Kohm CARBON FILM, 1/8W P.M	2
R206,812, 813		47Kohm CARBON FILM, 1/8W P.M	3
R211,212, 213		100Kohm CARBON FILM, 1/8W P.M	3
R601		56Kohm CARBON FILM, 1/8W P.M	1
R527,528		390Kohm CARBON FILM, 1/8W P.M	2
R519,520		560Kohm CARBON FILM, 1/8W P.M	2
R517,518		680Kohm CARBON FILM, 1/8W P.R	2
R214,804		470Kohm CARBON FILM, 1/8W P.R	2
R311,536		10Kohm CARBON FILM, 1/8W	2
(TV SECTION)			
VR4		K161100-10KB, TV TUNING VOLUME	1
SVR5,7		RVM083V-1 10KB, SEMIFIXED RESISTOR	2
SVR6		RVM083V-1 20KB, SEMIFIXED RESISTOR	1
SW1		00430014BC SLIDE SWITCH	1
R82		10Kohm CARBON FILM, 1/8W P.M	1
R77		4.7Kohm CARBON FILM, 1/8W P.M	1
R78		27Kohm CARBON FILM, 1/8W P.M	1
R87		39Kohm CARBON FILM, 1/8W P.M	1
R79,81		1M ohm CARBON FILM, 1/8W P.R	2
R80		100Kohm CARBON FILM, 1/8W P.R	1

(TV)

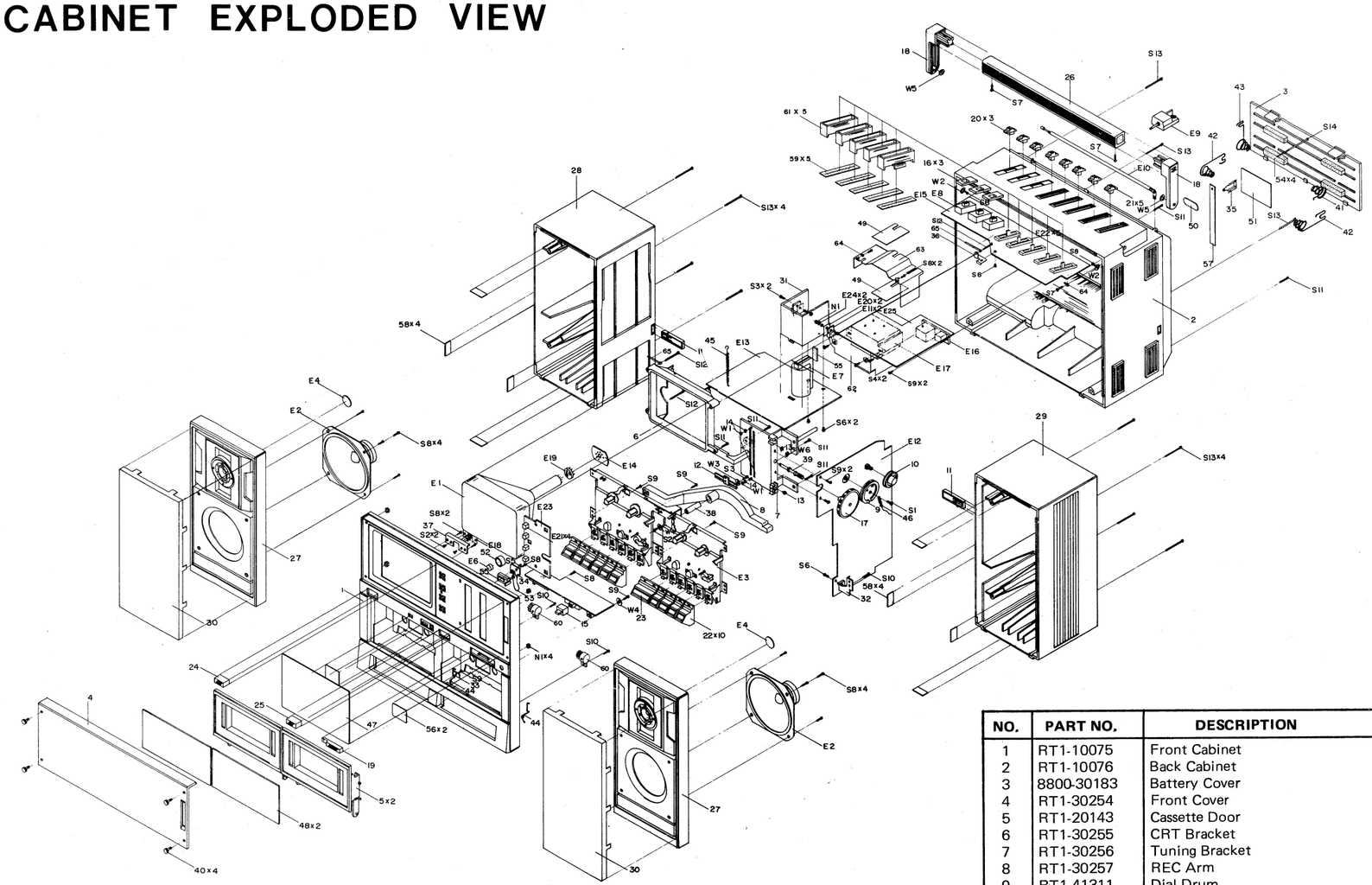
SYMBOL NO.	PART NO.	DESCRIPTION	Q'TY
C.R.T		4ADC4 C.R.T	1
F.B.T		KFS-20998 F.B.T	1
D.Y		KYS-20612 D.Y	1
UV-TUNER		TUMUB3EC-991 UV-TUNER	1
IC1		uPC-1366C IC	1
IC2		uPC-1379C IC	1
IC3		uPC-1382 IC	1
Q1		KTC1923-0 TRANSISTOR	1
Q2,7		KTC1815-Y TRANSISTOR	2
Q3		KTC2229-Y TRANSISTOR	1
Q4		KTC1959-Y TRANSISTOR	1
Q5		KTC2223 TRANSISTOR	1
Q6		KTB834Y or KTB596 TRANSISTOR	1
D1		EQA02-30B (30V, 1/2W) ZENER DIODE	1
D2,5,7		DS4001 SI DIODE	3
D3,4,9,11,13		DS4148 SWITCHING DIODE	5
D6,8		DS4003 SI DIODE	2
D10		EQA02-7B(6.8V, 1/2W) ZENER DIODE	1
D12		1SS168 SWITCHING DIODE	1
D14		1N4001 SI DIODE	1
SAW-FLT.		SAF-38.9MH52P SAW FILTER	1
CF1		TPS-5.5MA CERAMIC FILTER	1
CF2		SFE5.5MBF CERAMIC FILTER	1
CF3		CDA-5.5MC20 CERAMIC FILTER	1
SVR1		TT-24R 10KB SEMI VOLUME	1
SVR2,4		TT-24R 5KB SEMI VOLUME	2
SVR3		TT-24R 5KB SEMI VOLUME	1
VR1		EVU-E2AM20B14 VOLUME	1
VR2		EVU-E2AM20B52 VOLUME	1
VR3		EVU-E2AM20B55 VOLUME	1
T1		01TR RF IFT	1
T2		02TD DET IFT	1
L2		25TC INDUCTOR COIL	1
L1		01TL LINERARITY COIL	1
MONO JACK		HSJ0707-01-020 MONO JACK	1
MATCHING UNIT		KC-406 MATCHING UNIT	1
CRT SOCKET		NPS0051-01-010 CRT SOCKET	1
SPARK GAP		AGB15P202FS-K2M SPARK GAP	1
R59		1ohm CARBON FILM, 1/8W P.R	1
R46		3.9ohm CARBON FILM, 1/8W P.R	1
R34,35		10ohm CARBON FILM, 1/8W P.R	2
R16		12ohm CARBON FILM, 1/8W P.R	1
R1,9,28,71		47ohm CARBON FILM, 1/8W P.R	4
R27		82ohm CARBON FILM, 1/8W P.R	1
R6		100ohm CARBON FILM, 1/8W P.R	1
R5		120ohm CARBON FILM, 1/8W P.R	1
R43		22ohm CARBON FILM, 1/8W P.R	1
R4,17,45,51, 67,68		330ohm CARBON FILM, 1/8W P.R	6
R88		220ohm CARBON FILM, 1/8W P.R	1
R12		470ohm CARBON FILM, 1/8W P.R	1
R29		680ohm CARBON FILM, 1/8W P.R	1
R66		820ohm CARBON FILM, 1/8W P.R	1

SYMBOL NO.	PART NO.	DESCRIPTION	Q'TY
R13,38,73		1Kohm CARBON FILM, 1/8W P.R	3
R10		150ohm CARBON FILM, 1/8W P.R	1
R52,56		1.8Kohm CARBON FILM, 1/8W P.R	2
R84		1Kohm CARBON FILM, 1/16W P.R	1
R7,8,53		2.2Kohm CARBON FILM, 1/8W P.R	3
R2		2.7Kohm CARBON FILM, 1/8W P.R	1
R60,61,62, 63,69,70		10Kohm CARBON FILM, 1/8W P.R	6
R11,19,22,49		15Kohm CARBON FILM, 1/8W P.R	4
R48		18Kohm CARBON FILM, 1/8W P.R	1
R50,58		20Kohm CARBON FILM, 1/8W P.R	2
R54		22Kohm CARBON FILM, 1/8W P.R	1
R20,21		24Kohm CARBON FILM, 1/8W P.R	2
R47		33Kohm CARBON FILM, 1/8W P.R	1
R25		82Kohm CARBON FILM, 1/8W P.R	1
R57		68Kohm CARBON FILM, 1/8W P.R	1
R72		100Kohm CARBON FILM, 1/8W P.R	1
R14		470Kohm CARBON FILM, 1/8W P.R	1
R40,74		4.7Kohm CARBON FILM, 1/8W P.R	2
R39,83		5.6Kohm CARBON FILM, 1/8W P.R	2
R3		12Kohm CARBON FILM, 1/8W P.R	1
R64,65		100ohm CARBON FILM, 1/8W P.S	2
R23		150ohm CARBON FILM, 1/8W P.S	1
R18		220ohm CARBON FILM, 1/8W P.S	1
R37		270ohm CARBON FILM, 1/8W P.S	1
R86		75ohm CARBON FILM, 1/8W P.S	1
R24		5.6Kohm CARBON FILM, 1/8W P.S	1
R30		4.7Kohm CARBON FILM, 1/8W P.S	1
R55		12Kohm CARBON FILM, 1/8W P.S	1
R26		330Kohm CARBON FILM, 1/8W P.S	1
R15		1Kohm CARBON FILM, 1/8W P.S	1
R36		130ohm CARBON FILM, 1/2W P.R	1
R31,33		1ohm CARBON FILM, 1/2W P.R	2
R32		10ohm CARBON FILM, 1/2W P.R	1
R44		68ohm CARBON FILM, 1/2W P.R	1
C67		1μF 16V, TANTAL CAPACITOR	1
C56		0.0056μF 50V, STYROL CAPACITOR	1

SYMBOL NO.	PART NO.	DESCRIPTION	Q'TY
C34		56PF 500V, CERAMIC CAPACITOR	1
C35		0.01μF 500V, CERAMIC CAPACITOR	1
C14		18PF 50V, CERAMIC CAPACITOR	1
C44		270PF 50V, CERAMIC CAPACITOR	1
C13,15		0.001μF 50V, CERAMIC CAPACITOR	2
C6,7,10,12, 17,18,20,22, 25,28,39,42, 50,73,79,81		0.01μF 50V, CERAMIC CAPACITOR	16
C11		560PF 50V, CERAMIC CAPACITOR	1
C82		0.0047μF 50V, CERAMIC CAPACITOR	1
C1,2,3,4		0.047μF 50V, CERAMIC CAPACITOR	4
C84,86		0.1μF 50V, CERAMIC CAPACITOR	2
C85		0.018μF 200V, MYLAR CAPACITOR	1
C60,69		0.001μF 100V, MYLAR CAPACITOR	1
C32		0.0015μF 100V, MYLAR CAPACITOR	1
C45		0.0022μF 100V, MYLAR CAPACITOR	1
C57,68		0.0047μF 100V, MYLAR CAPACITOR	2
C78		0.018μF 100V, MYLAR CAPACITOR	1
C70,74		0.01μF 100V, MYLAR CAPACITOR	2
C71		0.022μF 100V, MYLAR CAPACITOR	1
C38		0.056μF 200V, MYLAR CAPACITOR	1
C59,62,63		0.033μF 100V, MYLAR CAPACITOR	3
C55,58		0.047μF 100V, MYLAR CAPACITOR	2
C64		0.068μF 100V, MYLAR CAPACITOR	1
C29,52		0.1μF 100V, MYLAR CAPACITOR	2
C75,76		0.1μF 50V, ELECTROLYTIC CAPACITOR	2
C54,		1μF 50V, ELECTROLYTIC CAPACITOR	1
C23,61		2.2μF 50V, ELECTROLYTIC CAPACITOR	2
C49,80		4.7μF 16V, ELECTROLYTIC CAPACITOR	2
C24,43		10μF 16V, ELECTROLYTIC CAPACITOR	2
C77		33μF 16V, ELECTROLYTIC CAPACITOR	1
C30,36,46,53, 72		47μF 16V, ELECTROLYTIC CAPACITOR	5
C5,19,40,65		100μF 16V, ELECTROLYTIC CAPACITOR	4
C26,33		220μF 10V, ELECTROLYTIC CAPACITOR	2
C21,41,66		470μF 16V, ELECTROLYTIC CAPACITOR	3
C48		1000μF 6.3V, ELECTROLYTIC CAPACITOR	1
C8,9		33μF 50V, ELECTROLYTIC CAPACITOR	2
C27		4.7μF 160V, ELECTROLYTIC CAPACITOR	1

SYMBOL NO.	PART NO.	DESCRIPTION	Q'TY
C37		4.7μF 25V (NP. HF), ELECTROLYTIC CAPACITOR	1
C51		470μF 25V, ELECTROLYTIC CAPACITOR	1
C16		100μF 16V, ELECTROLYTIC CAPACITOR	1
R75		2.2Kohm CARBON FILM, 1/8W P.R	1
R90		1Mohm CARBON FILM, 1/8W P.R	1
R94		3.3Mohm CARBON FILM, 1/8W P.R	1
R76		150Kohm CARBON FILM, 1/8W P.R	1
R89		470Kohm CARBON FILM, 1/8W P.R	1
R92		3.3Kohm CARBON FILM, 1/8W P.R	1
R93		4.7M ohm CARBON FILM, 1/8W P.R	1
C87		4.7μF 160V, ELECTROLYTIC CAPACITOR	1

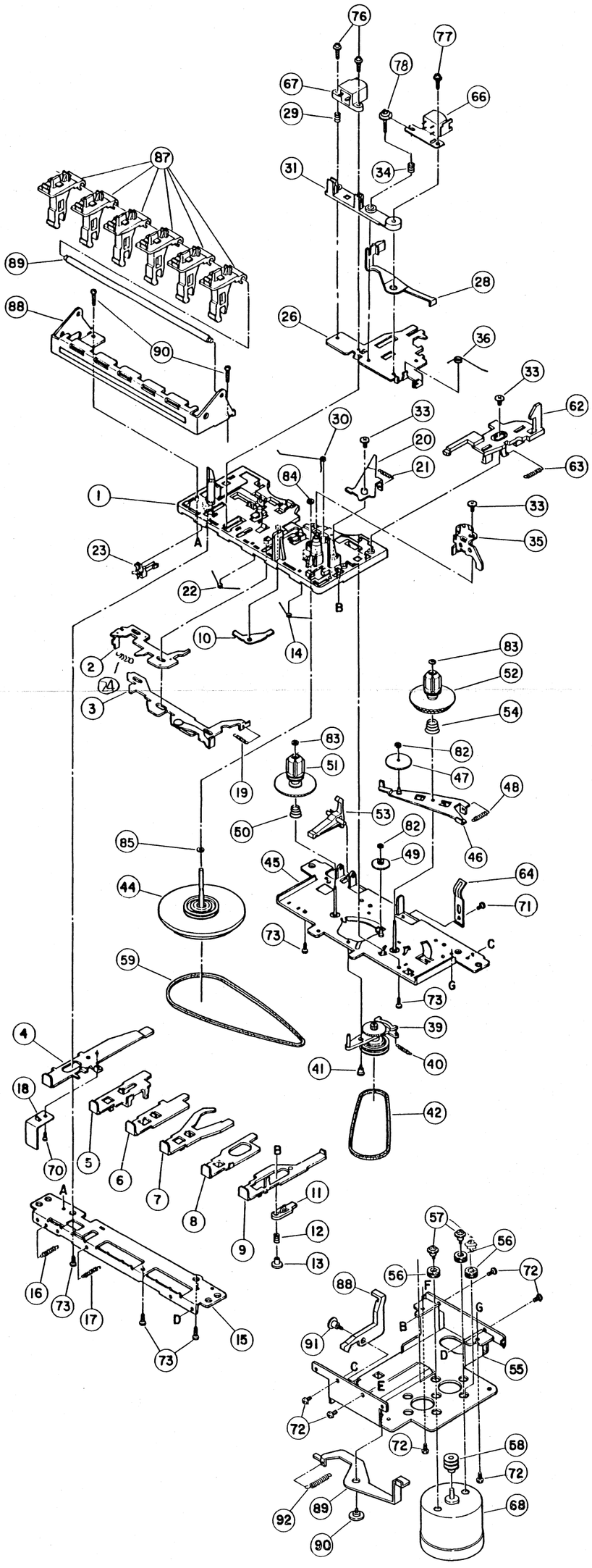
CABINET EXPLODED VIEW



NO.	PART NO.	DESCRIPTION	Q'TY
1	RT1-10075	Front Cabinet	1
2	RT1-10076	Back Cabinet	1
3	8800-30183	Battery Cover	1
4	RT1-30254	Front Cover	1
5	RT1-20143	Cassette Door	2
6	RT1-30255	CRT Bracket	1
7	RT1-30256	Tuning Bracket	1
8	RT1-30257	REC Arm	1
9	RT1-41311	Dial Drum	1
10	RT1-41312	TV Drum	1
11	RT1-41313	Release Knob	2
12	RT1-41314	Dial Pointer	1
13	MDMP470579	Pulley	2
14	MDMP404398	Pulley	2
15	RT1-41315	Knob Base "A"	1
16	RT1-41356	Knob Base "B"	1
17	RT1-41316	Tuning Knob	1
18	RT1-41317	Handle Holder	2
19	RT1-41318	Slide Knob "A"	1
20	RT1-41319	Slide Knob "B"	3
21	RT1-41320	Slide Knob "C"	5
22	RT1-41321	Deck Knob "A"	10
23	RT1-30258	Deck Knob "B"	1
24	RT1-41322	Power Knob	1
25	RT1-41357	NR Knob	1
26	RT1-41323	Handle Bar	1
27	RT1-20144	S/P Front Cabinet	2
28	RT1-10077	S/P Back Cabinet "L"	1
29	RT1-10078	S/P Back Cabinet "R"	1
30	RT1-41324	Speaker Grill	2
31	RT1-41325	Heat Sink	1
32	RT1-41358	PCB Bracket	1
33	RT1-41326	Door Stopper Bracket	1
34	RT1-41328	Counter Bracket	1
35	8800-40915	Battery Terminal	1

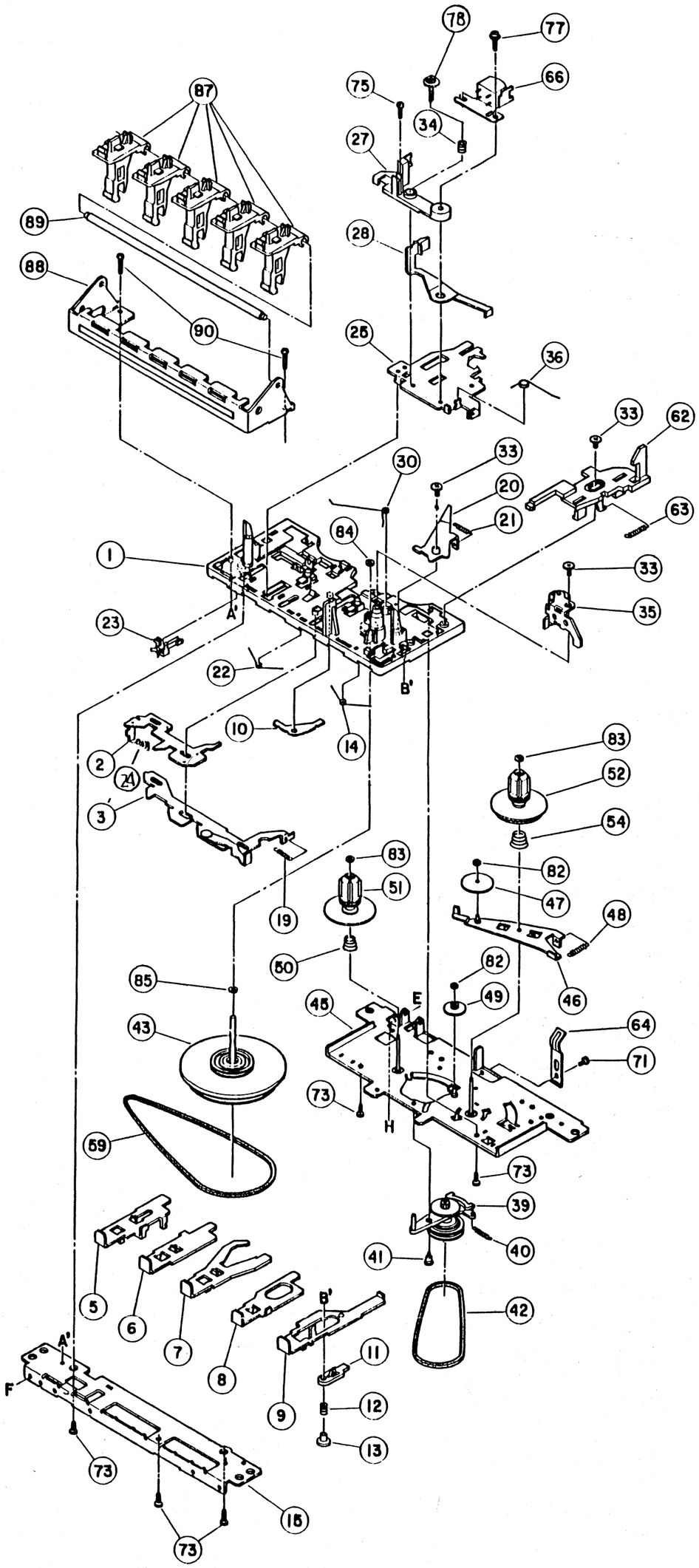
NO.	PART NO.	DESCRIPTION	Q'TY
36	RT1-41329	Guide Bracket	1
37	RT1-41327	Power S/W Bracket	1
38	RT1-41359	REC Shaft	1
39	RT1-41330	Tuning Shaft	1
40	RT1-41331	Decoration Screw	4
41	RT1-41332	Battery Spring	1
42	RT1-41333	B/T Terminal Spring "A"	2
43	RT1-41334	B/T Terminal Spring "B"	1
44	RT1-41335	Door Spring	2
45	RT1-41336	CRT GND Spring	1
46	V333-41106	Dial Spring	1
47	RT1-41337	Dial Window	1
48	RT1-41338	Door Window	2
49	RT1-41484	Insu Plate	2
50	RT1-41340	Vol. Sel Cover	1
51	RT1-41341	Spec Plate	1
52	BP04-40467	Mic Bushing	1
53		Counter Belt	1
54	8800-41047	Battery Cushion	4
55	RT1-41342	FBT Cushion	4
56	RT1-41343	Tape Mirror	2
57	RT1-41344	Battery Ribbon	1
58		Felt	8
59	RT1-41360	Knob Spacer	5
60	4600-41082	Gear Ass'y	2
61	4600-41083	Volume Cover	5
62	RT1-41476	Shield Plate	1
63	RT1-41483	DY Shield Plate	1
64	405-428004	Terminal Plate	2
65	405-426007	Wire Clamper	2
66			
S1	Machine Screw	FLT M2.6x10MsZn	1
S2	Machine Screw	BID M3x6MsZn	3
S3	Machine Screw	BID M3x8MsZn	3
S4	Tapping Screw	BID ϕ4x12 MsZn	2
S5	TAP Tite	BID ϕ2x3(S) MsZn	1
S6	TAP Tite	BID ϕ3x6(B) MsZn	4
S7	Tapping	OVL ϕ3x12 (T1) MsCr	3
S8	Tapping	BID ϕ3x8 (T1) MsZn	16
S9	Tapping	BID ϕ3x10 (T1)	9
S10	Tapping	BID ϕ3x12 (T1)	3
S11	Tapping	BID ϕ3x15 (T1)	6
S12	Tapping	BID ϕ2x25 (T1) MsZn	3
S13	Tapping	BID ϕ3x30 (T1) MsZn	11
S14	Tapping Screw	BID ϕ3x60 (T1) MsZn	1
W1	Flt Washer	Fiber ϕ2xϕ5x0.3t	2
W2	Flt Washer	PVC ϕ3xϕ10x2t	2
W3	Flt Washer	SPCC ϕ3x10x0.8t	1
W4	Flt Washer	SPCC ϕ3x14x1t	2
W5	Spring Washer	SUS ϕ14xϕ7x0.2t	2
W6		E-Type Ring ϕ4	1
N1		Nut	6
E1		CRT	1
E2		Speaker	2
E3		Deck	2
E4		Piezo	2
E5		Counter	1
E6		C. Mic	1
E7		F.B.T	1
E8		Slide SW	3
E9		ANT Pad Ass'y	1
E10		Rod Ant	1
E11		TR	2
E12		Main PCB	1
E13		TV PCB	1
E14		CRT PCB	1
E15		Control PCB	1
E16		AC Socket	1
E17		Power Trans	1
E18		Push S.W	1
E19		CRT Socket	1
E20		Mica	2
E21		LED	4
E22		Slide V.R	5
E23		LED PCB	1
E24		Insurator	2
E25		Power PCB	1

DECK EXPLODED VIEW (A)



NO.	CODE NO.	DESCRIPTION	Q'TY
1	1821 01 01	MAIN BASE ASS'Y	2
2	1821 01 05	SWITCH PLATE	2
3	1821 01 501	PUSH BUTTON ACTUATOR ASS'Y	2
4	1821 01 28A	REC BUTTON LEVER	1
5	1821 01 35	PLAY BUTTON LEVER	2
6	1821 01 30	RWD BUTTON LEVER	2
7	1821 01 31	FF BUTTON LEVER	2
8	1821 01 32	STOP BUTTON LEVER	2
9	1821 01 503	PAUSE BUTTON LEVER ASS'Y	2
10	1821 01 68	RWD LEVER	2
11	1821 01 51	PAUSE LEVER	2
12	1821 01 16	PAUSE LEVER SPRING	2
13	1821 01 34	PAUSE STOPPER	2
14	1821 01 23	BUTTON LEVER SPRING(C)	2
15	1821 01 19	SUB CHASSIS	2
16	1821 01 07	BUTTON LEVER SPRING (A)	1
17	1821 01 50	PLAY BUTTON LEVER SPRING (S)	1
18	1510 02 02	REC SPRING PLATE	1
19	1821 01 22	ACTUATOR SPRING	2
20	1821 01 20	AUTO LEVER	2
21	1821 01 21	AUTO LEVER SPRING	2
22	1821 01 49	BUTTON LEVER SPRING (E)	2
23	MSW-1541	LEAF SWITCH	2
24	1821 01 38	SW.PLATE SP.	2
25	1821 03 10	HEAD PANEL	1
26	1829 03 04	HEAD PANEL	1
27	1821 03 02	HEAD BASE	1
28	1829 03 301	SENSING PLATE ASS'Y	2
29	1821 03 08	E.H. SPRING	1
30	1821 03 12	HEAD PANEL SPRING (S)	2
31	1829 03 02	HEAD BASE	1
32			
33	1821 13 05	P.M.E SCREW	6
34	1821 03 07	SPRING	2
35	1821 04 301	PINCH ROLLER ARM ASS'Y	2
36	1821 04 02	PINCH ROLLER SPRING	2
37			
38			
39	1821 07 302	RF PULLEY ARM ASS'Y	2
40	1821 07 04	RF PULLEY ARM SPRING	2
41	1867 04 13	RF ARM COLLER SCREW	2
42	1821 07 03	RF BELT	2
43	1821 09 302	FLY WHEEL ASS'Y	1
44	1821 09 301	FLY WHEEL ASS'Y	1
45	1829 10 501A	REEL BASE ASS'Y	2
46	1821 10 503	TAKE UP GEAR PLATE ASS'Y	2
47	1867 03 10	TAKE UP ROLLER GEAR	2
48	1821 10 08	T.G. PLATE SPRING	2
49	1867 03 09	FF GEAR	2
50	1800 05 17	BACK TENSION SPRING	2
51	1821 10 301	SUPPLY REEL ASS'Y	2
52	1829 10 302	TAKE UP REEL ASS'Y	2
53	1800 02 10	RECORD SAFETY LEVER	1
54	1821 10 12	BACK TENSION SPRING	2
55	1821 12 59	MOTOR BRACKET	1
56	1821 12 02	MOTOR RUBBER	3
57	1820 13 06	COLLER SCREW (K)	3
58	1821 12 14	MOTOR PULLEY	1
59	1821 12 21	MAIN BELT	2
60			
61			
62	1821 13 04	EJECT SLIDE LEVER	2
63	1821 13 02	EJECT SLIDE LEVER SPRING	2
64	1821 10 03	PACK SPRING	2
65			
66		R.P. HEAD	2
67		E. HEAD	1
68		MOTOR	1
69			
70	9076 00 00	TAMS SCREW M2x3	1
71	9179 00 00	C.TAPPING SCREW M2x3	2
72	9180 00 00	C.TAPPING SCREW M2x4	6
73	9716 00 00	P.TAPPING BIND SCREW M2x4	10
74			
75	9004 00 00	SCREW M2x6	1
76	9821 00 00	⊕ ⊖ CAP SCREW M2x8	2
77	9820 00 00	⊕ ⊖CAP SCREW M2x7	2
78	9922 00 00	AZIMUTH SCREW	2
79			
80			
81			
82	9421 00 00	P.WASHER CUT 1.2x3x0.25	4
83	9888 00 00	P.WASHER CUT 1.2x3x0.4	4
84	9875 00 00	P.WASHER CUT 1.55x3.8x0.5	2
85	9937 00 00	P.WASHER CUT 2.05x4x0.4	2
86			
87	1821 31 07	OPERATION LEVER	11
88	1821 31 06	B FRAME (S)	2
89	1829 31 03	BUTTON LEVER SHAFT	2
90	9982 00 00	SCREW (FOR CAMERA) M2x7	4
91	1821 12 15	P.KICK LEVER (B)	1
92	1821 12 68	P.KICK LEVER (A)	1
93	1821 12 23	P.K. COLLER SCREW (A)	1
94	1821 12 24	P.K. COLLER SCREW (B)	1
95	1821 12 25	P.KICK LEVER SPRING	1
96			
97			
98			
99			
100			

DECK EXPLODED VIEW (A')



NO.	CODE NO.	DESCRIPTION	Q'TY
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11	1821 01 51	PAUSE LEVER	2
12	1821 01 16	PAUSE LEVER SPRING	2
13	1821 01 34	PAUSE STOPPER	2
14	1821 01 23	BUTTON LEVER SPRING(C)	2
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16	1821 01 07	BUTTON LEVER SPRING (A)	1
17	1821 01 50	PLAY BUTTON LEVER SPRING (S)	1
18	1510 02 02	REC SPRING PLATE	1
19	1821 01 22	ACTUATOR SPRING	2
20	1821 01 20	AUTO LEVER	2
21	1821 01 21	AUTO LEVER SPRING	2
22	1821 01 49	BUTTON LEVER SPRING (E)	2
23	MSW-1541	LEAF SWITCH	2
24	1821 01 38	SW.PLATE SP.	2
25	1821 03 10	HEAD PANEL	1
26	1829 03 04	HEAD PANEL	1
27	1821 03 02	HEAD BASE	1
28	1829 03 301	SENSING PLATE ASS'Y	2
29	1821 03 08	E.H. SPRING	1
30	1821 03 12	HEAD PANEL SPRING (S)	2
31	1829 03 02	HEAD BASE	1
32			
33	1821 13 05	P.M.E SCREW	6
34	1821 03 07	SPRING	2
35	1821 04 301	PINCH ROLLER ARM ASS'Y	2
36	1821 04 02	PINCH ROLLER SPRING	2
37			
38			
39	1821 07 302	RF PULLEY ARM ASS'Y	2
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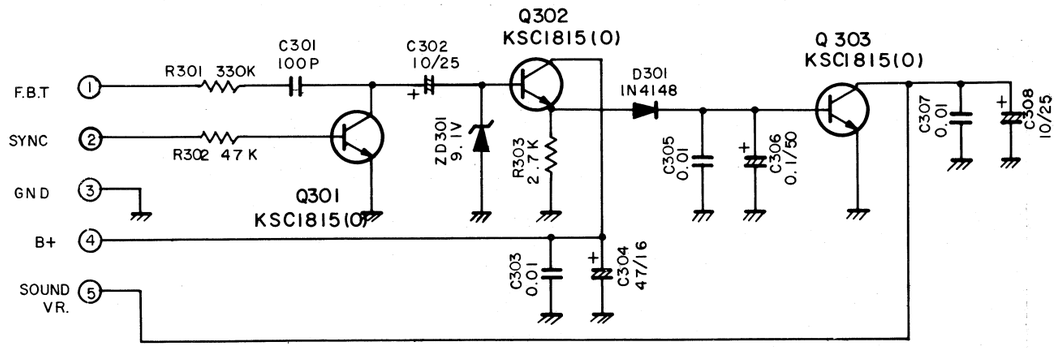
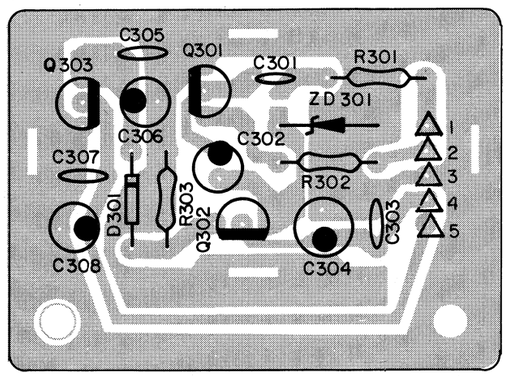
43	1821 09 302	FLY WHEEL ASS'Y	1
44	1821 09 301	FLY WHEEL ASS'Y	1
45	1829 10 501A	REEL BASE ASS'Y	2
46	1821 10 503	TAKE UP GEAR PLATE ASS'Y	2
47	1867 03 10	TAKE UP ROLLER GEAR	2
48	1821 10 08	T.G. PLATE SPRING	2
49	1867 03 09	FF GEAR	2
50	1800 05 17	BACK TENSION SPRING	2
51	1821 10 301	SUPPLY REEL ASS'Y	2
52	1829 10 302	TAKE UP REEL ASS'Y	2
53	1800 02 10	RECORD SAFETY LEVER	1
54	1821 10 12	BACK TENSION SPRING	2
55			
56			
57			
58			
59	1821 12 21	MAIN BELT	2
60			
61			
62	1821 13 04	EJECT SLIDE LEVER	2
63	1821 13 02	EJECT SLIDE LEVER SPRING	2
64	1821 10 03	PACK SPRING	2
65			
66		R.P. HEAD	2
67		E. HEAD	1
68			
69			
70	9076 00 00	TAMS SCREW M2x3	1
71	9179 00 00	C.TAPPING SCREW M2x3	2
72			
73	9716 00 00	P.TAPPING BIND SCREW M2x4	10
74			
75	9004 00 00	SCREW M2x6	1
76	9821 00 00	⊕ ⊖ CAP SCREW M2x8	2
77	9820 00 00	⊕ ⊖CAP SCREW M2x7	2
78	9922 00 00	AZIMUTH SCREW	2
79			
80			
81			
82	9421 00 00	P.WASHER CUT 1.2x3x0.25	4
83	9888 00 00	P.WASHER CUT 1.2x3x0.4	4
84	9875 00 00	P.WASHER CUT 1.55x3.8x0.5	2
85	9937 00 00	P.WASHER CUT 2.05x4x0.4	2
86			
87	1821 31 07	OPERATION LEVER	11
88			
89			
90			
91			
92			
93	1821 12 23	P.K. COLLER SCREW (A)	1
94	1821 12 24	P.K. COLLER SCREW (B)	1
95	1821 12 25	P.KICK LEVER SPRING	1
96			
97			
98			
99			
100			

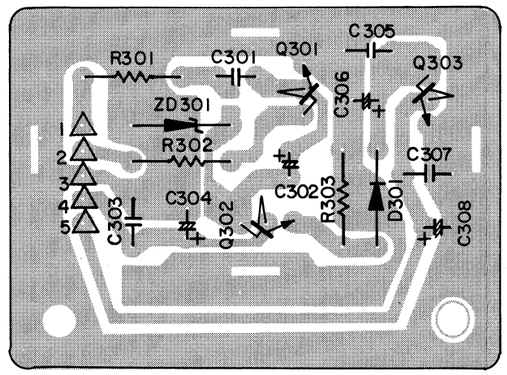
MUTE CIRCUIT



P.C.B. TOP VIEW



P.C.B. BOTTOM VIEW



* REFERENCE *

○ **HOW TO CONNECT (At above circuit)**

Number 1 — Soldered to FBT (F2)
Number 2 — Soldered to IC 2 pin 15 (Sync Signal)
Number 3 — Soldered to Ground
Number 4 — Soldered to Q6 Collector (B + Line)
Number 5 — Soldered to IC3 Pin 8 (Sound)

○ **MAJOR ELECTRICAL PARTS LIST**

Transistor: Q301, Q302, Q303 ..... KSC1815 (O)
Zener Diode: ZD301 ..... 9.1V
Silicon Diode: D301 ..... 1N 4148